

LBT-N455K

SERVICE MANUAL

*E Model
Tourist Model*

- LBT-N455K is composed of following models.
As for the service manual, it is issued for each component model,
then, please refer to it.

COMPONENT MODEL NAME FOR LBT-N455K

COMPACT DISC DECK RECEIVER SYSTEM	HCD-N455K
SPEAKER SYSTEM	SS-LB555AV

SPECIFICATIONS

General

Power requirements

Malaysia model :
220 – 240V AC, 50/60Hz
Other models :
110 – 120V or 220 – 240V AC,
adjustable, 50/60Hz

Power consumption

185W

Supplied accessories

AM loop aerial (1)
Remote RM-SD50 (1)
Sony SUM-3 (NS) batteries (2)
FM wire aerial (1)
Audio cords (4)
Speaker cords (2)

Design and specifications are subject to change without notice.

PARTS LIST

NOTE :

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Abbreviation EA : Saudi Arabia model MY : Malaysia model

No.	Part No.	Description	Remark
ACCESSORIES & PACKING MATERIALS *****			
	1-501-374-11	ANTENNA, LOOP (EXCEPT MY)	
	1-501-659-41	ANTENNA (FM)	
	1-501-721-11	ANTENNA (LOOP) (MY)	
	1-769-317-11	CORD, SPEAKER (RED/BLACK) (SS) (2.5m)	
	1-775-458-11	CORD, SPEAKER (BLUE/BLACK) (SS) (2.5m)	
	3-810-803-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, CHINESE)	
	3-810-803-31	MANUAL, INSTRUCTION (ARABIC) (EA)	
*	4-979-310-01	INDIVIDUAL CARTON (HCD) (EXCEPT MY)	
	4-979-371-01	COVER, BATTERY (for RM-SD50)	
*	4-979-431-01	CUSHION (BOTTOM) (HCD)	
*	4-980-140-01	CUSHION (UPPER) (HCD)	
*	4-980-318-01	INDIVIDUAL CARTON (SS)	
*	4-980-685-01	CUSHION (SS)	
*	4-981-900-01	INDIVIDUAL CARTON (HCD) (MY)	
	8-917-537-90	REMOTE COMMANDER (RM-SD50)	

COMPACT Hi-Fi STEREO SYSTEM

SONY®

Sony Corporation
Consumer A&V Products Company
Home A&V Products Div.

9-960-682-11

English
96D0421-1D
Printed in Japan
© 1996.4

Published by Home A&V Products Div. Quality Engineering Dept.

HCD-N455K

SERVICE MANUAL

Thailand Model



HCD-N455K is the tuner, deck, CD and amplifier section in LBT-N455K.

CD SECTION	Model Name Using Similar Mechanism	HCD-D570/N355/N355K
	CD Mechanism Type	CDM37-5BD19
	Base Unit Type	BU-5BD19
	Optical Pick-up Type	KSS-213BA/S-N
TAPE DECK SECTION	Model Name Using Similar Mechanism	HCD-V4500
	Tape Transport Mechanism Type	TCM-220WR2E

SPECIFICATIONS

CD player section

System Compact disc and digital audio system

Laser Semiconductor laser ($\lambda = 780 \text{ nm}$)
Emission duration: continuous

Laser output Max 44.6 mW*

* This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.

Wavelength 780 - 790 nm

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

87.5 - 108.0 MHz
100 kHz step

Aerial FM wire aerial

Aerial terminals 75 ohm unbalanced

Intermediate frequency 10.7 MHz

AM tuner section

Tuning range

AM: 531 - 1,602 kHz
(with the AM tuning interval set at 9 kHz)

530 - 1,717 kHz
(with the AM tuning interval set at 10 kHz)

Aerial AM loop aerial
External aerial terminals

Intermediate frequency 450 kHz

Tape player section

Recording system 4-track 2-channel stereo

Frequency response 40 - 13,000 Hz ($\pm 1 \text{ dB}$, using SONY TYPE I cassette)

40 - 14,000 Hz ($\pm 1 \text{ dB}$, using SONY TYPE II cassette)

Wow and Flutter $\pm 0.15\% \text{ W.P. Peak (IEC)}$
0.7% W.P. RMS (DIN)

$\pm 0.2\% \text{ W.P. Peak (DIN)}$

Amplifier section

Peak music power output: 2,000 W (6 Ω , 10% THD)

Continuous RMS power output

FRONT SPEAKER: 30 W + 30 W (6 Ω at 1 kHz, 5% THD)

WOOFER SYSTEM: 70 W (6 Ω at 50 Hz, 10% THD)

— Continue on next page —

COMPACT Hi-Fi
STEREO SYSTEM



SONY®

Inputs

MONO (phone jack):

Sensitivity 2 mV, impedance
47 kilohms

VIDEO (AUDIO) (phone jack):

Sensitivity 250 mV, impedance
47 kilohms

MIC (phone jack):

Sensitivity 1 mV, impedance
10 kilohms

Outputs

PHONES (phone jack):

accept headphones of 8 ohms or more

FRONT SPEAKER: accept impedance of 8

to 16 ohms

SURROUND SPEAKER:

accept impedance of 8 to
16 ohms

SUPER WOOFER

accept impedance of 8 to
16 ohms

Supplied accessories

Adaptor cord (1)

Remote RM-S020 (1)

Sony SUD-3 (25) batteries (2)

Rack system SCS-1455A

FM wire aerial (1)

Speaker grids (3)

General

Power requirements

220 ~ 240 V AC, 50/60 Hz

Power consumption:

270 w

Dimensions

Approx. 395 x 425 x 400 mm

(15 x 16 7/8 x 15 7/8 inches) (w/h/d)

incl. projecting parts and controls

Mass

Approx. 12.5 kg (27 lb 9 oz.)

Design and specifications subject to change
without notice

CAUTION

Use of controls or adjustments or performance of procedures
other than those specified herein may result in hazardous
radiation exposure.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be
damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of soldering iron around 270°C
during repairing.
- Do not touch the soldering iron on the same conductor of the
circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering
or unsoldering.

Laser component in this product is capable of emitting radiation
exceeding the limit for Class 1.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

This appliance is classified as
a CLASS 1 LASER product.
The CLASS 1 LASER
PRODUCT MARKING is
located on the rear exterior.

CAUTION	; INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ADVARSEL	; USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGA UDSÆTTELSE FOR STRÅLING.
VARO!	; AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTIINA LASERSÄTELYLLE.
VARNING	; LASERSTRÅLING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD.
ADVARSEL	; USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES UNNGA EKSPONERING FOR STRÅLEN.

This caution
label is located
inside the unit.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE
WITH MARK \triangle ON THE SCHEMATIC DIAGRAMS AND IN
THE PARTS LIST ARE CRITICAL TO SAFE OPERATION.
REPLACE THESE COMPONENTS WITH SONY PARTS
WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS
MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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SECTION 1 SERVICING NOTE

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts. The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

Carry out the "S curve check" in "CD section adjustment" and check that the S curve waveform is output three times.

FL Display Tube, LED All Lit and Key Check mode

When the **TUNER/BAND**, **DISPLAY/DEMO**, and **FILE 2** buttons are pressed simultaneously, the FL display tube and LEDs will all light up. Press any button to enter the key check mode.

When the key check mode is entered, the FL display tube displays "K 1 J0 V0". Each time a button is pressed, the counter increases in the following order, K 2 → K 3 → K 4.

If buttons already pressed once are pressed again, the counter will not increase. When the **VOLUME** knob is rotated in the + direction, the count increases in the following order.

V1 → V2 → V3.

When rotated in the – direction, it decreases in the following order.

V0 → V9 → V8.

When the AMS dial is rotated in the clockwise direction, the count increases in the following order.

J1 → J2 → J3.

When rotated in the counterclockwise direction, it decreases in the following order.

J0 → J9 → J8.

To exit from the test mode, press the **TUNER/BAND**, **DISPLAY/DEMO**, **FILE 2** buttons simultaneously again.

Switching the channel step 9 kHz/10 kHz

Press **ENTER/NEXT** button and **SYSTEM POWER** button simultaneously to switch the AM channel step 9 kHz and 10 kHz. Be sure not to change with carelessness.

All Reset

When **TUNER/BAND**, **DISPLAY/DEMO**, and **FILE 3** buttons are pressed simultaneously, the contents of a preset are restored to those at shipping.

SECTION 2 GENERAL

This section is extracted from instruction manual.

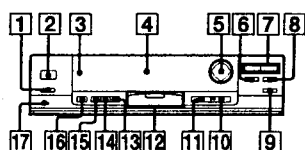
Index to Parts and Controls

Refer to the pages indicated in parentheses for details on how to use the controls.

Front Panel

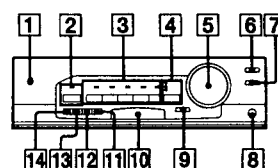
Tuner section

Refer to the pages indicated in parentheses for details on how to use the controls.



- 1 SLEEP button (23)
- 2 SYSTEM POWER switch (7)
- 3 Remote sensor
- 4 Display window (30)
- 5 CURSOR CONTROL buttons (6, 21)
- 6 TUNING MODE button (12)
- 7 TUNING +/- buttons (12)
- 8 TUNER MEMORY button (13)
- 9 STEREO/MONO button (12)
- 10 ENTER/NEXT button (6, 9, 21)
- 11 DISPLAY/DEMO button (5, 8, 21)
- 12 TUNER/BAND button (12, 18, 24)
- 13 REC button (24)
- 14 DAILY 2 button (23)
- 15 DAILY 1 button (23)
- 16 TIMER SET button (23)
- 17 CLOCK SET button (6)

Amplifier section



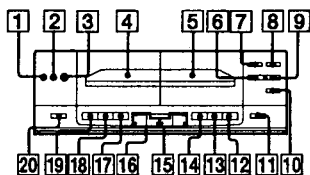
- 1 PHONES jack (20)
- 2 EFFECT button/indicator (20)
- 3 FILE 1 – 5 buttons/indicators (20, 21)
- 4 FILE SELECT button/indicators (20, 21)
- 5 VOLUME control (7, 20)
- 6 DBFB button (20)
- 7 SURROUND (15, 21)
- 8 SUPER TWEETER button (20)
- 9 EQ MEMORY button (22)
- 10 FUNCTION button (7, 14)
- 11 # UP button (26)
- 12 b DOWN button (26)

continue to next page →

continued →

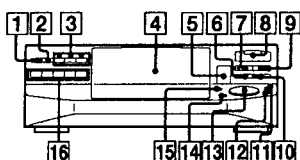
- 13 ECHO button (25)
- 14 KARAOKE PON/MPX button (25)

Tape player section



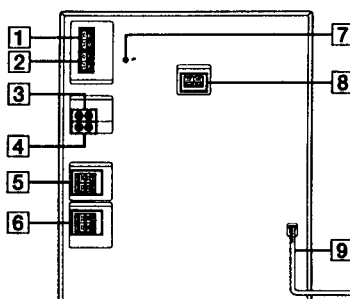
- 1 MIC 1 jack (25)
- 2 MIC 2 jack (25)
- 3 MIC LEVEL control (25)
- 4 Cassette compartment for DECK A (14)
- 5 Cassette compartment for DECK B (14)
- 6 II (pause) button (14)
- 7 HIGH SPEED DUBBING button (19)
- 8 CD SYNCHRO button (15)
- 9 REC (recording) button (15)
- 10 DIRECTION button (15)
- 11 EJECT button for DECK B (14)
- 12 >> (fast rightward) button for DECK B (14)
- 13 << (fast leftward) button for DECK B (14)
- 14 □ STOP button for DECK B (14)
- 15 </> (play) button for DECK B (14)
- 16 </> (play) button for DECK A (14)
- 17 >> (fast rightward) button for DECK A (14)
- 18 << (fast leftward) button for DECK A (14)
- 19 □ STOP button for DECK A (14)
- 20 EJECT button for DECK A (14)

CD player section



- 1 MUSIC CLIP PLAY button (11)
- 2 MUSIC CLIP ERASE button (11)
- 3 CLIP A, B, C buttons/indicators (10)
- 4 Front cover (7)
- 5 OPEN button (7)
- 6 DISC SKIP button (7)
- 7 II (pause) button (7)
- 8 ▷ (play) button (7)
- 9 □ (stop) button (7)
- 10 AUTO button/indicator (7)
- 11 PROGRAM button (9)
- 12 REPEAT button (9)
- 13 JOG dial (7)
- 14 SHUFFLE buttons (8)
- 15 CONTINUE button (7)
- 16 DISC 1 - 5 buttons (7)

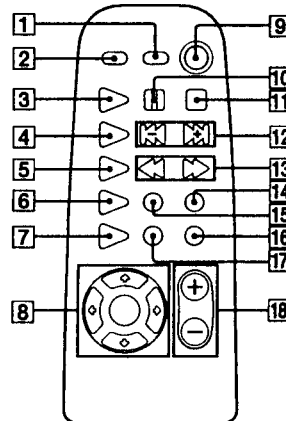
Rear Panel



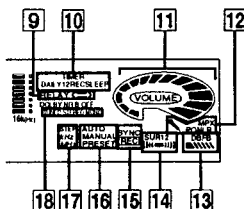
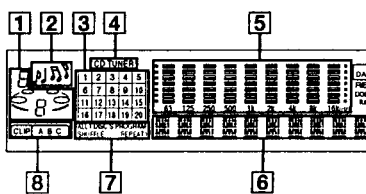
- 1 AM terminal (4)
- 2 FM 75Ω terminal (4)
- 3 PHONO IN jacks (26)
- 4 VIDEO (AUDIO) IN jacks (26)
- 5 FRONT SPEAKER connectors (4)
- 6 SURROUND SPEAKER connectors (4)
- 7 ♂ ground terminal (4)
- 8 WOOFER SYSTEM connectors (4)
- 9 AC power cord (5)

- 14 SUR indication (15, 21)
- 15 SYNC REC indicator (15)
- 16 Tuning mode indications (12)
- 17 STEP/frequency waves indication (12)
- 18 TUNED/STEREO/MONO indications (12)

Remote



Display Window



- 1 SLEEP button (23)
- 2 LOOP button (10)
- 3 ▷ CD (play) button (7)
- 4 TUNER/BAND ▷ button (12)
- 5 DECK A ▷ button (14)
- 6 DECK B ▷ button (14)
- 7 FUNCTION button (7, 14)
- 8 MUSIC MENU buttons (20, 21)
- 9 POWER button (7)
- 10 II (pause) (7)
- 11 □ (stop) (7)
- 12 ⏮ / ⏭ buttons (7, 13, 17)
- 13 </> buttons (7, 8)
- 14 EDIT button (17)
- 15 CHECK button (9, 17)
- 16 DISC SKIP button (7)
- 17 CLEAR button (9)
- 18 VOL (volume) +/- buttons (7, 20)

- 1 Disc calendar (7)
- 2 Demo mode indications (5)
- 3 Music calendar (7)
- 4 CD/TUNER indication (7)
- 5 Graphic Equalizer indication (21)
- 6 Multi-display (7, 12, 21)
- 7 CD play mode indications (8)
- 8 CLIP indicator (11)
- 9 Tape direction mode indication (14)
- 10 Timer indication (24)
- 11 VOLUME indication (7)
- 12 KARAOKE PON/MPX R L indication (25)
- 13 DBFB indication (20)

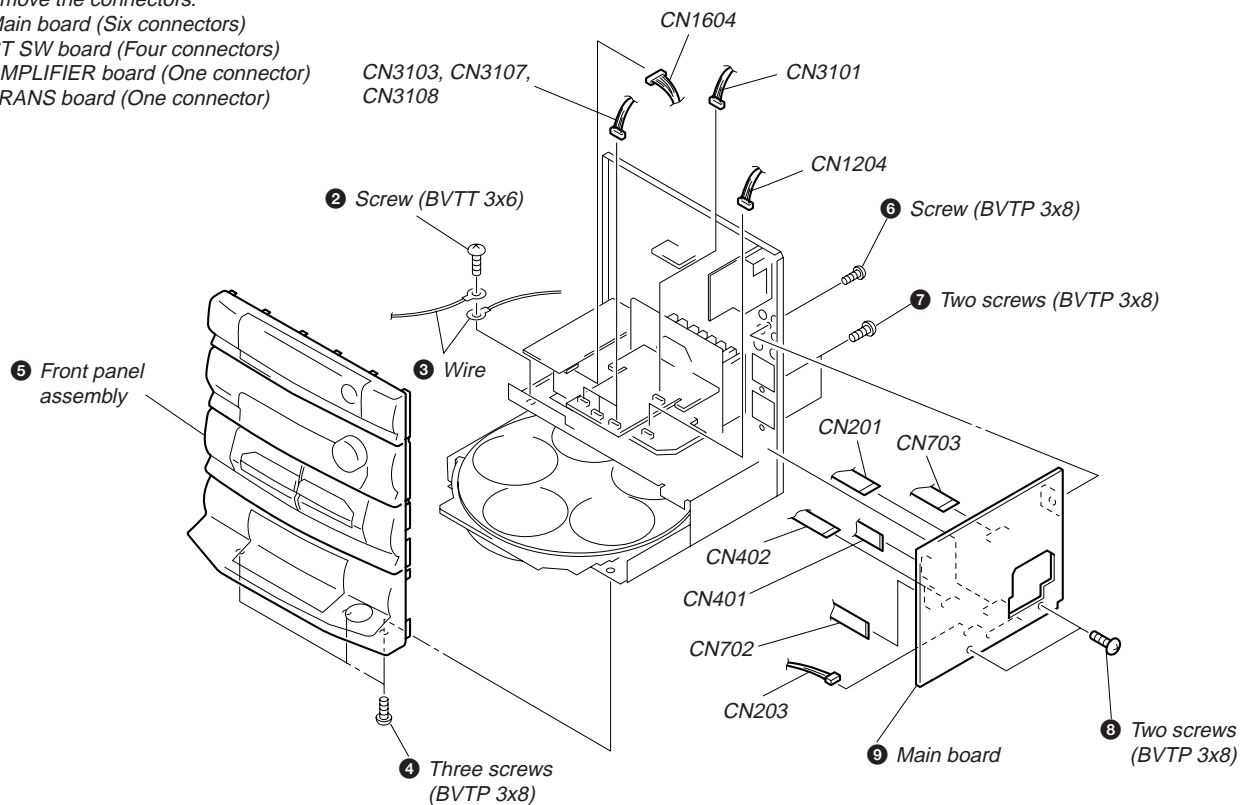
SECTION 3 DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

3-1. FRONT PANEL ASSEMBLY AND MAIN BOARD

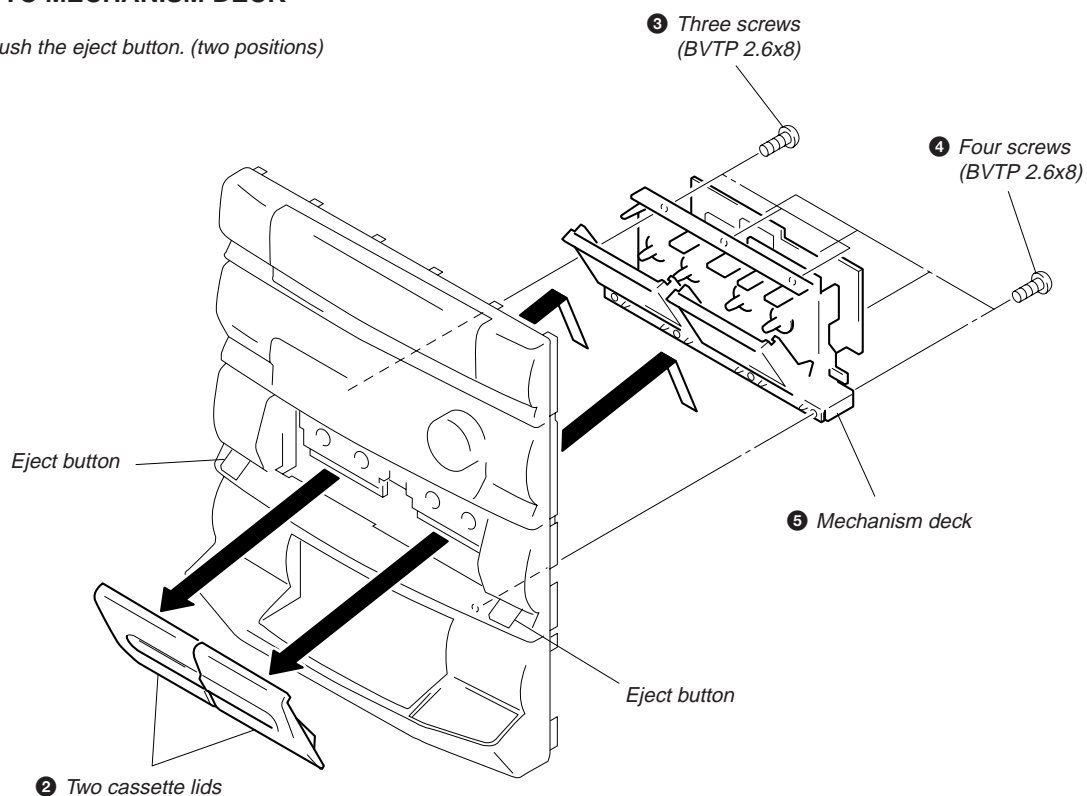
1 Remove the connectors.

- Main board (Six connectors)
- ST SW board (Four connectors)
- AMPLIFIER board (One connector)
- TRANS board (One connector)

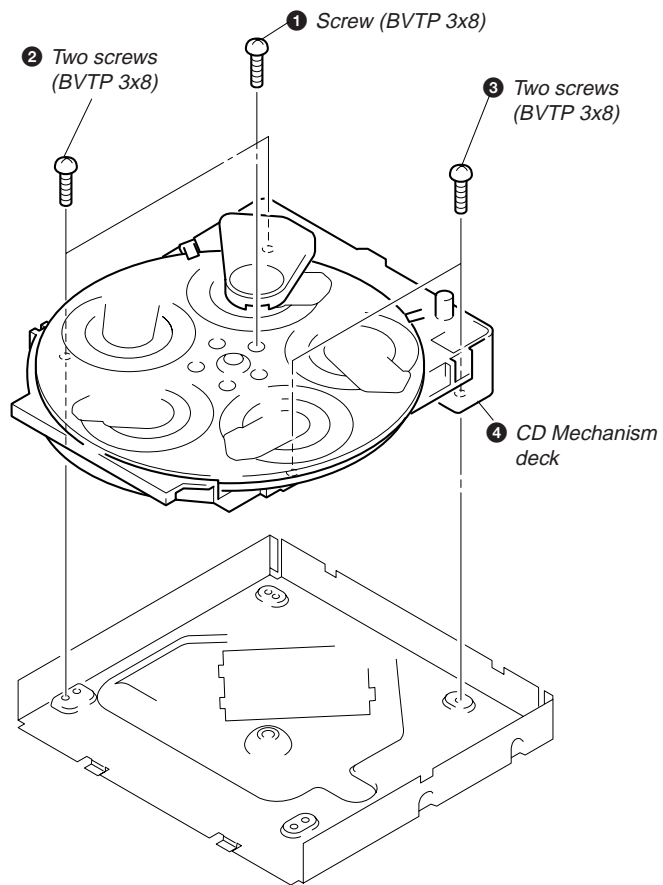


3-2. TC MECHANISM DECK

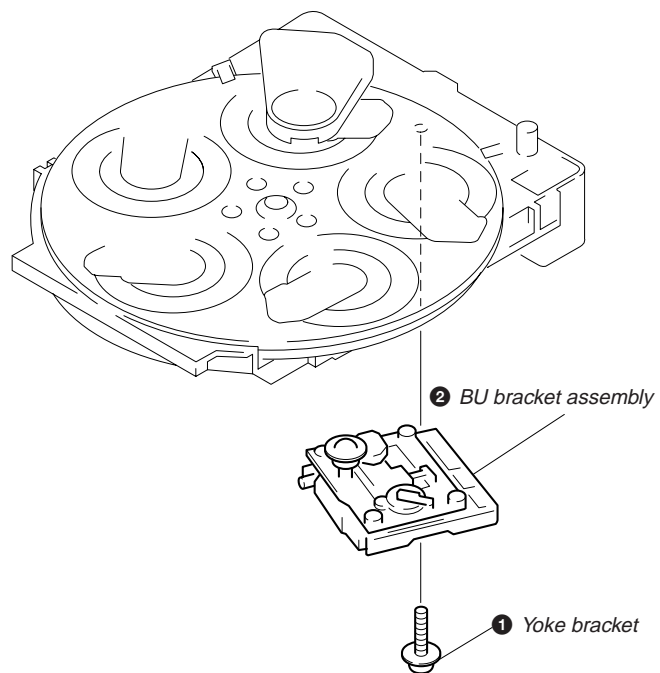
1 Push the eject button. (two positions)



3-3. CD MECHANISM DECK



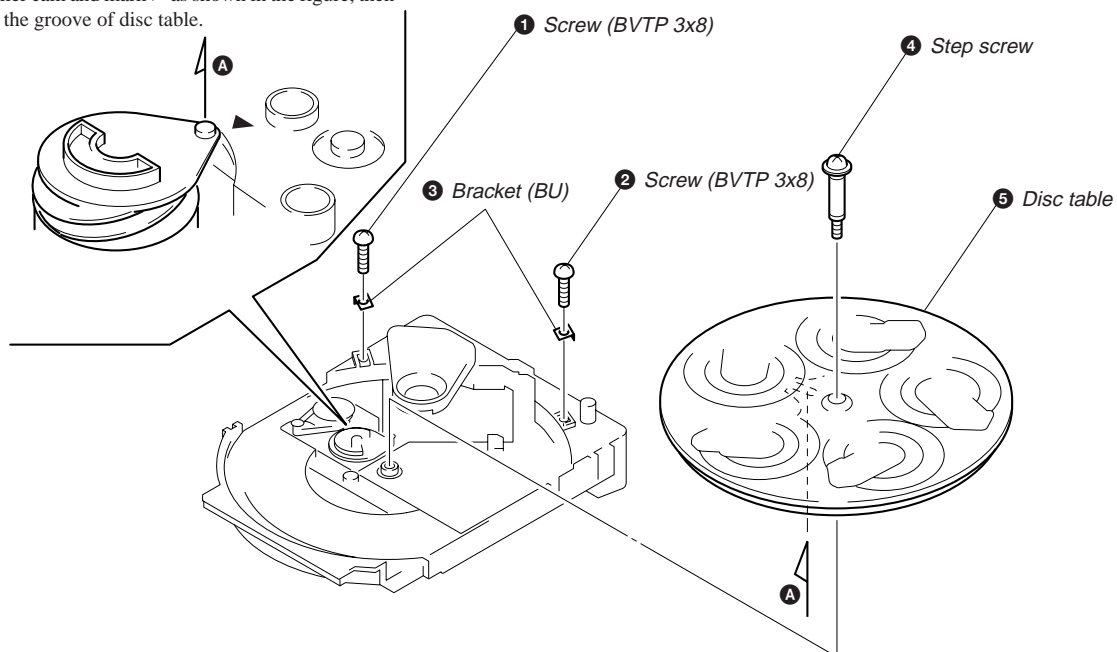
3-4. BU BRACKET ASSEMBLY



3-5. DISC TABLE

Note :

When the Disc table is installed, adjust the positions of Roller cam and mark ► as shown in the figure, then set to the groove of disc table.



SECTION 4 MECHANICAL ADJUSTMENTS

Precaution

1. Clean the following parts with a denatured alcohol-moistened swab:

record/playback heads	pinch rollers
erase head	rubber belts
capstan	idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
FWD	CQ-102C	36 to 61 g • cm (0.5 - 0.84 oz • inch)
FWD back tension	CQ-102C	2 to 6 g • cm (0.02 - 0.08 oz • inch)
REV	CQ-102RC	36 to 61 g • cm (0.5 - 0.84 oz • inch)
REV back tension	CQ-102RC	2 to 6 g • cm (0.02 - 0.08 oz • inch)
FF/REW	CQ-201B	61 to 143 g • cm (0.85 - 1.99 oz • inch)
FWD tension	CQ-403A	100 g or more (3.53 oz or more)
REV tension	CQ-403R	100 g or more (3.53 oz or more)

SECTION 5 ELECTRICAL ADJUSTMENTS

DECK SECTION

0 dB=0.775V

1. Demagnetize the record/playback head with a head demagnetizer.
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjusted.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-CH.
7. Switches and controls should be set as follows unless otherwise specified.

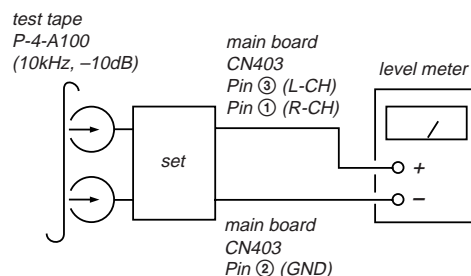
Tape	Signal	Used for
P-4-A100	10 kHz, -10 dB	Azimuth Adjustment
WS-48B	3 kHz, 0 dB	Tape Speed Adjustment
P-4-L300	315 Hz, 0 dB	Level Adjustment

Record/Playback Head Azimuth Adjustment (Deck A, Deck B)

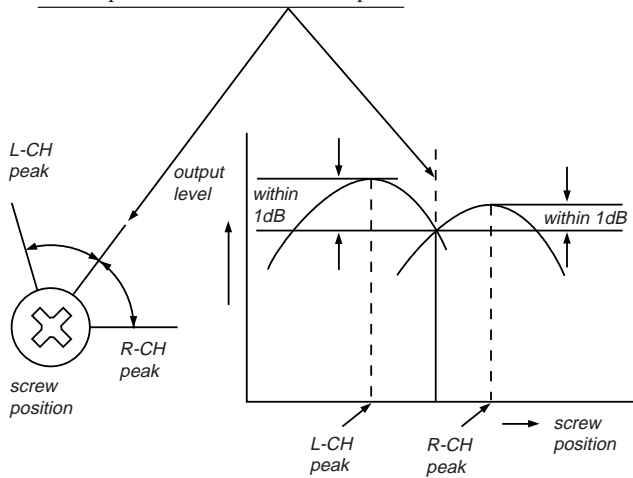
Note: Perform this adjustments for both decks.

Procedure:

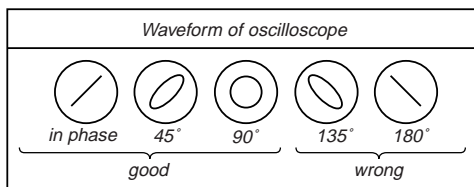
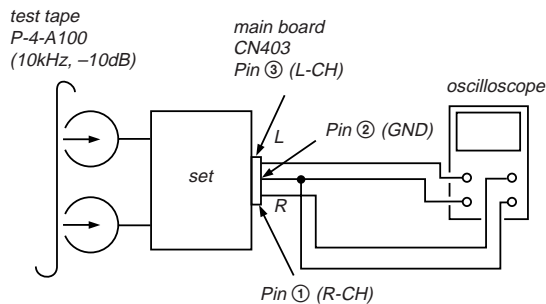
1. Mode : Playback



- Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1 dB of peak.

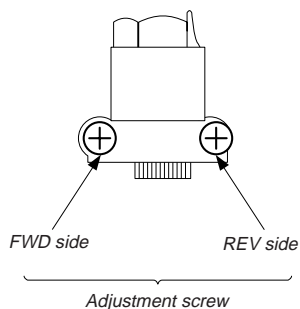


3. Mode: Playback



- After the adjustments, apply suitable locking compound to the parts adjusted.

Adjustment Location: Playback Head (Deck A)
Record/Playback/Erase Head (Deck B)



Tape Speed Adjustment (Deck A)

Note: Start the Tape Speed adjustment as below after setting the test mode.

The tape speed can be changed with the **HIGH SPEED DUBBING** button during the test mode.

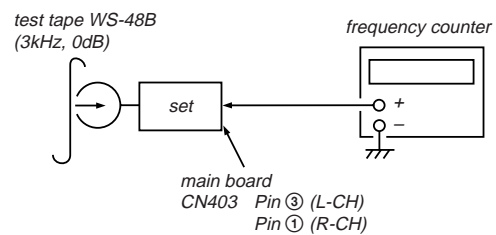
Method :

- Turn the power switch on.
- Press the **DISPLAY/DEMO** button, **FILE 1** button and **TUNER/BAND** button simultaneously.

To exit from the test mode, Press the **SYSTEM POWER** button.

Procedure :

Mode: Playback



- Insert the WS-48B into the deck A to playback.
- Press the **HIGH SPEED DUBBING** button. Then at HIGH SPEED mode.
- Adjust the RV652 on the AUDIO board so that the frequency counter reading becomes $6,000 \pm 30$ Hz.
- Press the **HIGH SPEED DUBBING** button again to be set the NORMAL SPEED mode.
- Set to the playback mode.
- Adjust the RV651 on the AUDIO board so that the frequency counter reading becomes $3,000 \pm 15$ Hz.

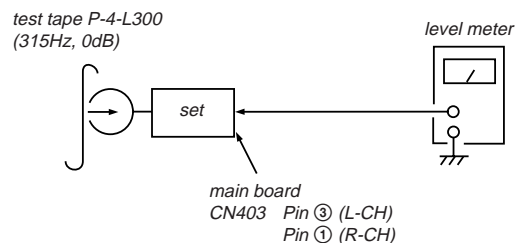
Frequency difference between deck A and deck B the beginning of the tape should be within $\pm 1.5\%$.

Adjustment Location: AUDIO board

Playback Level Adjustment (Deck A, Deck B)

Procedure:

Mode: Playback



Deck A is RV311 (L-CH) and RV411 (R-CH), deck B is RV301 (L-CH) and RV401 (R-CH) so that adjustment within the following adjustment level.

Adjustment level:

CN403 playback level: 301.5 to 338.3 mV (-8.2 to -7.2 dB)
level difference between the channels: within ± 0.5 dB

Adjustment Location: AUDIO board

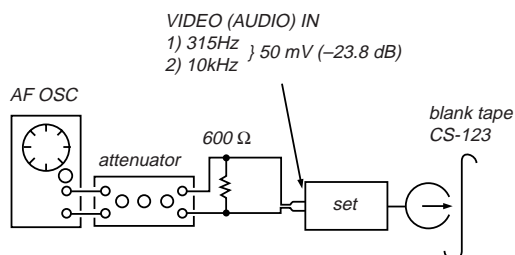
Record Bias Adjustment (Deck B)

Procedure:

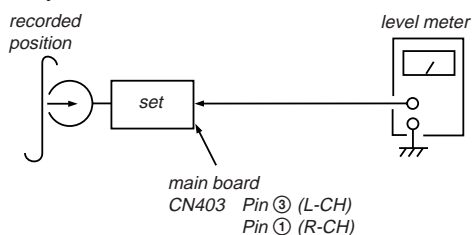
Reference)

When set to the test mode performed in **Tape Speed Adjustment**, when the tape is rewound after recording, the “REC memory mode” which rewinds only the recorded portion and stops is set. This “REC memory mode” is convenient for performing this adjustment.

1. Press **FUNCTION** button to select VIDEO.
2. Mode: record



3. Mode: Playback



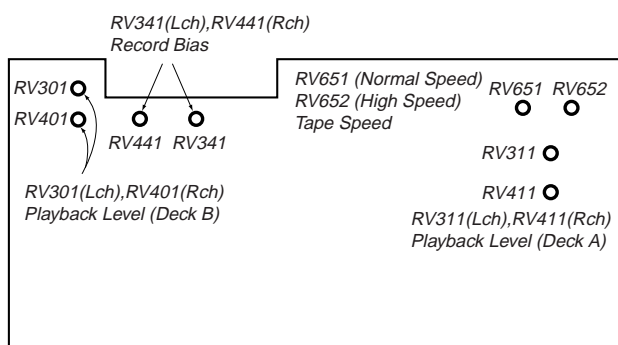
4. Confirm playback the signal recorded in step 2 become adjustment level as follows.
If these levels do not adjustment level, adjust the RV341 (L-CH) and RV441 (R-CH) on the AUDIO board to repeat steps 2 and 3.

Adjustment level: The playback output of 10 kHz level difference against 315 Hz reference should be ± 0.5 dB.

Adjustment Location: AUDIO board

Adjustment Location

[AUDIO BOARD] (Conductor Side)



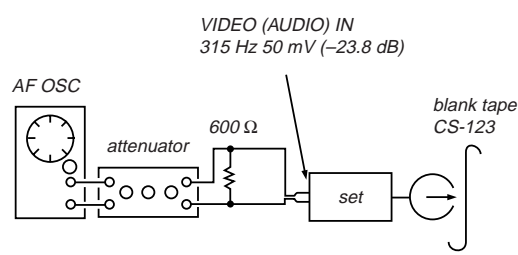
Record Level Adjustment (Deck B)

Procedure:

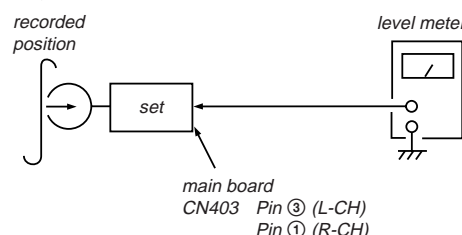
Reference)

When set to the test mode performed in **Tape Speed Adjustment**, when the tape is rewound after recording, the “REC memory mode” which rewinds only the recorded portion and stops is set. This “REC memory mode” is convenient for performing this adjustment.

1. Press **FUNCTION** button to select VIDEO.
2. Mode: record



3. Mode: Playback



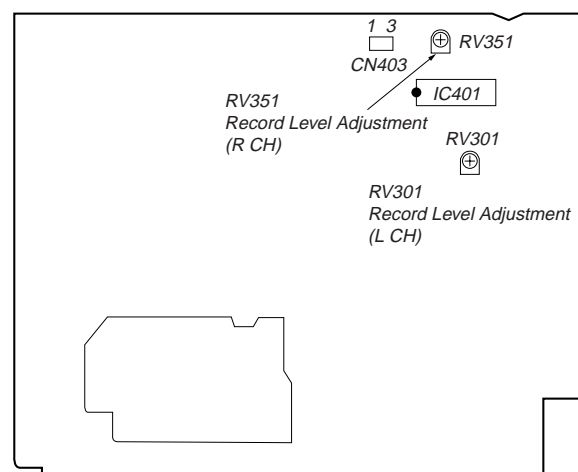
4. Confirm playback the signal recorded in step 2 become adjustment level as follows.
If these levels do not adjustment level, adjust the RV301 (L-CH) and RV351 (R-CH) on the main board to repeat steps 2 and 3.

Adjustment level:

CN403 PB level: 47.2 to 53.0 mV (−24.3 to −23.3 dB)

Adjustment Location: MAIN board

[MAIN BOARD] (Component Side)



TUNER SECTION

0dB=1μV

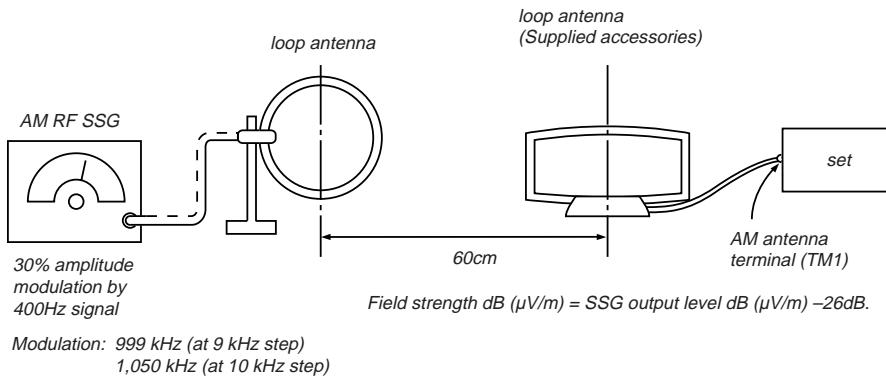
Note: 1. As a front-end (FE1) is difficult to repair if faulty, replace it with new one.

AM Tuned Level Adjustment

Note: FM Tuned Level adjustment should be performed after this AM Tuned Level Adjustment.

Setting:

Band: MW



Procedure:

1. Set the output of SSG so that the input level of the set becomes 55 dB.
2. Tune the set to 999 kHz or 1,050 kHz.
3. Adjust RV42 to the point (moment) when the TUNED indicator will change from going off to going on.

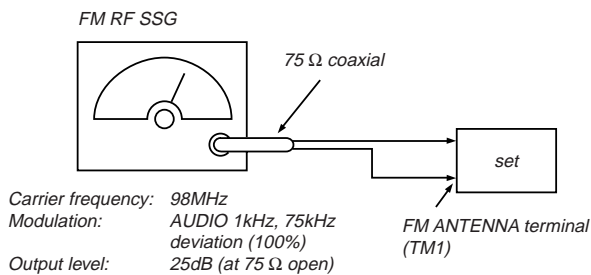
Adjustment Location: TCB board

FM Tuned Level Adjustment

Note: This adjustment should be performed after the AM Tuned Level Adjustment.

Setting:

Band: FM

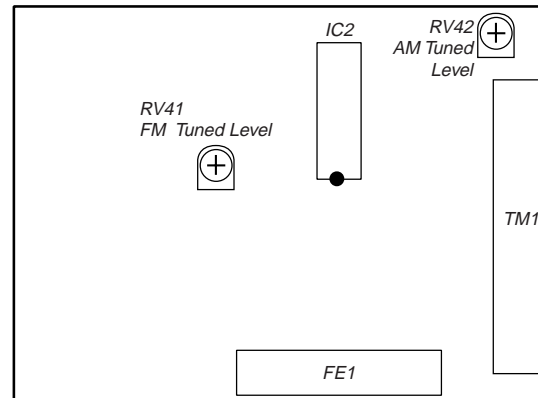


Procedure:

1. Supply a 25 dB 98 MHz signal from the ANTENNA terminal.
2. Tune the set to 98 MHz.
3. Adjust RV41 to the point (moment) when the TUNED indicator will change from going off to going on.

Adjustment Location

[TCB BOARD] (Component Side)

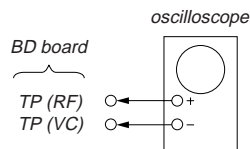


CD SECTION

Note:

1. CD Block is basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10M impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.
5. Adjust the focus bias adjustment when optical block is replaced.

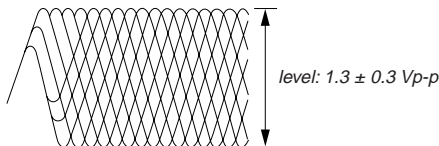
Focus Bias Adjustment



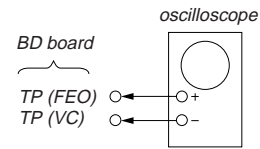
Procedure:

1. Connect oscilloscope to test point TP (RF).
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Adjust RV101 so that the waveform is clear.
(Clear RF signal waveform means that the shape “ \diamond ” can be clearly distinguished at the center of the waveform.)
5. After adjustment, check the RF signal level.

- RF signal
VOLT/DIV: 200 mV
TIME/DIV: 500 nS



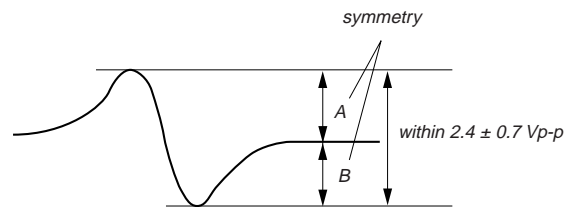
S Curve Check



Procedure :

1. Connect oscilloscope to test point TP (FEO).
2. Connect between test point TP (FOK) and Ground by lead wire.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and turned Power switch on again and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 2.4 ± 0.7 Vp-p.

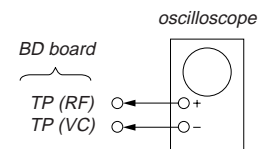
S-curve waveform



6. After check, remove the lead wire connected in step 2.

- Note:**
- Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
 - Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

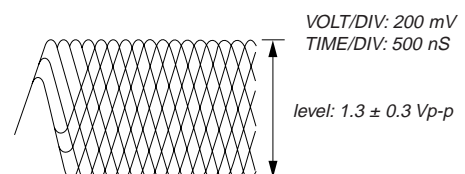


Procedure :

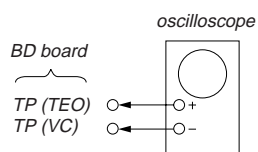
1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

- Note:** Clear RF signal waveform means that the shape “ \diamond ” can be clearly distinguished at the center of the waveform.

RF signal waveform

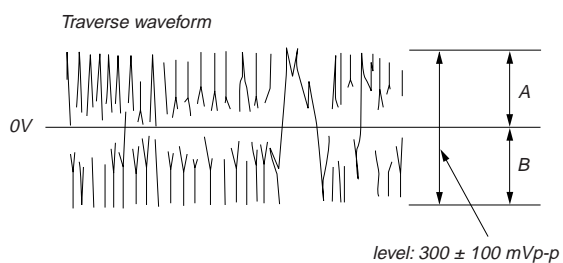


E-F Balance Check



Procedure:

1. Connect test point TP703 (ADJ2) on Main board to Ground with a lead wire.
2. Connect oscilloscope to test point TP (TEO).
3. Turned Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0Vdc, and check this level.



Specified level: • $\frac{A-B}{2(A+B)} \times 100 = \text{less than } \pm 7 (\%)$

• $A + B = 300 \pm 100 \text{ mVp-p}$

6. Remove the lead wire connected in step 1.

Focus/Tracking Gain Adjustment (RV102, RV103)

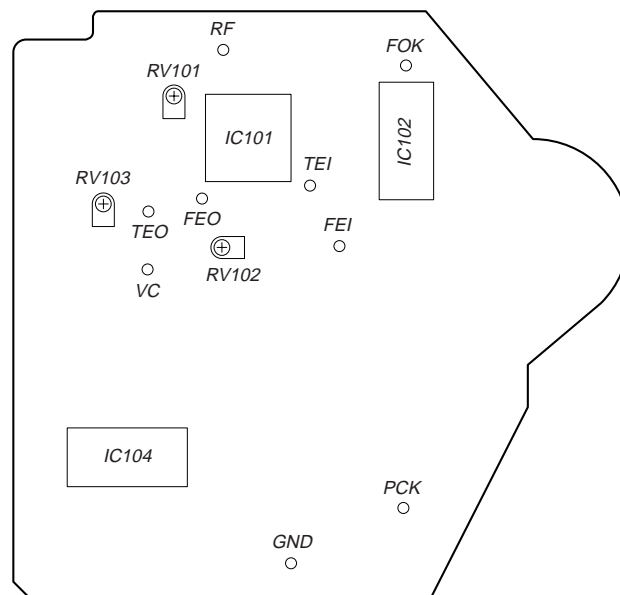
This gain has a margin, so even if it is slightly off.
There is no problem.

Therefore, do not perform this adjustment.

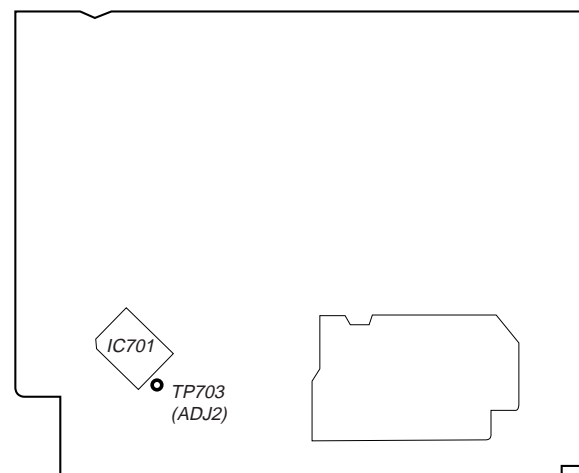
Please note that it should be fixed to mechanical center position when you moved and do not know original position.

Adjustment Location:

[BD BOARD] — Component Side —

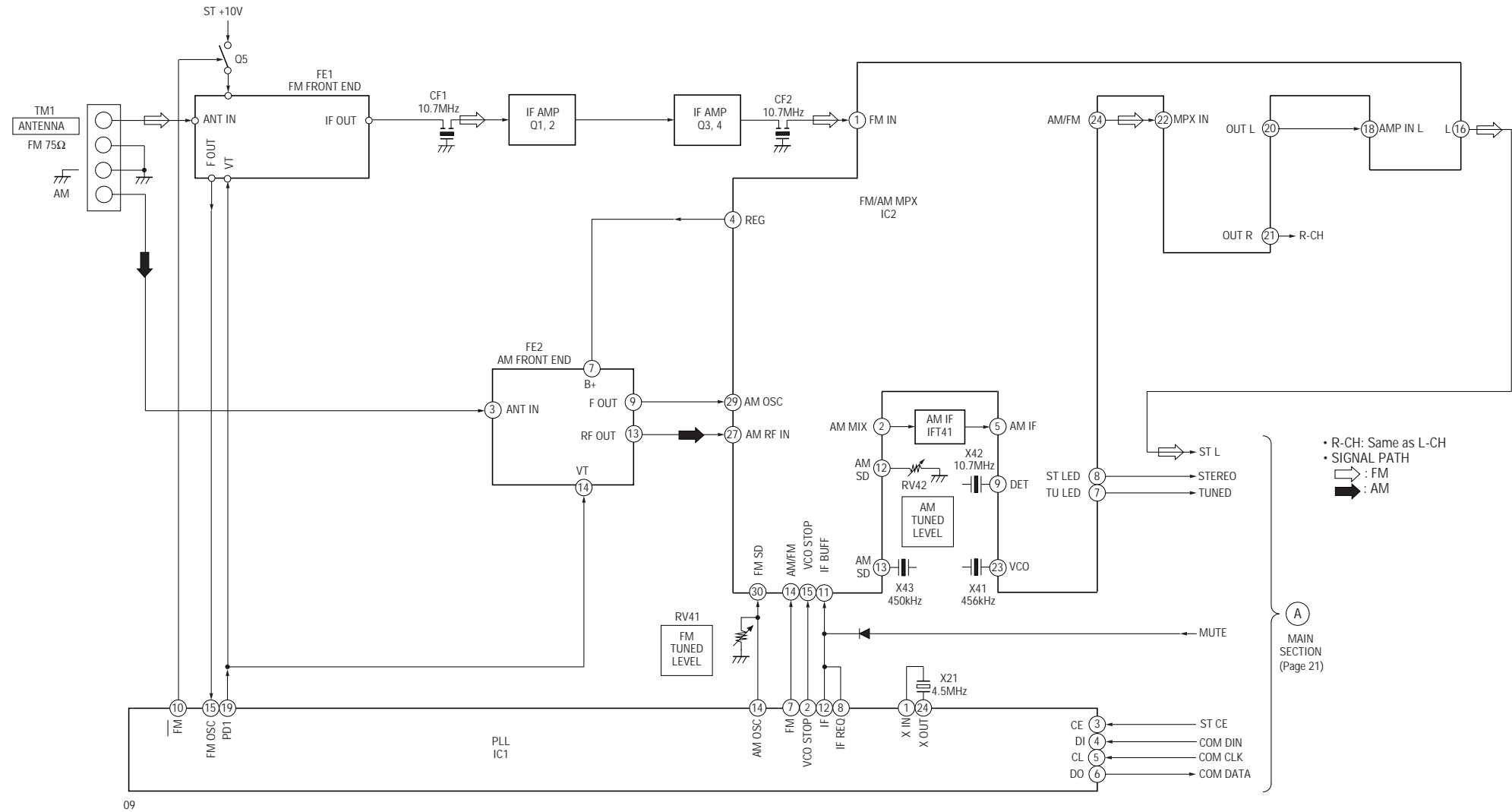


[MAIN BOARD] — Conductor Side —



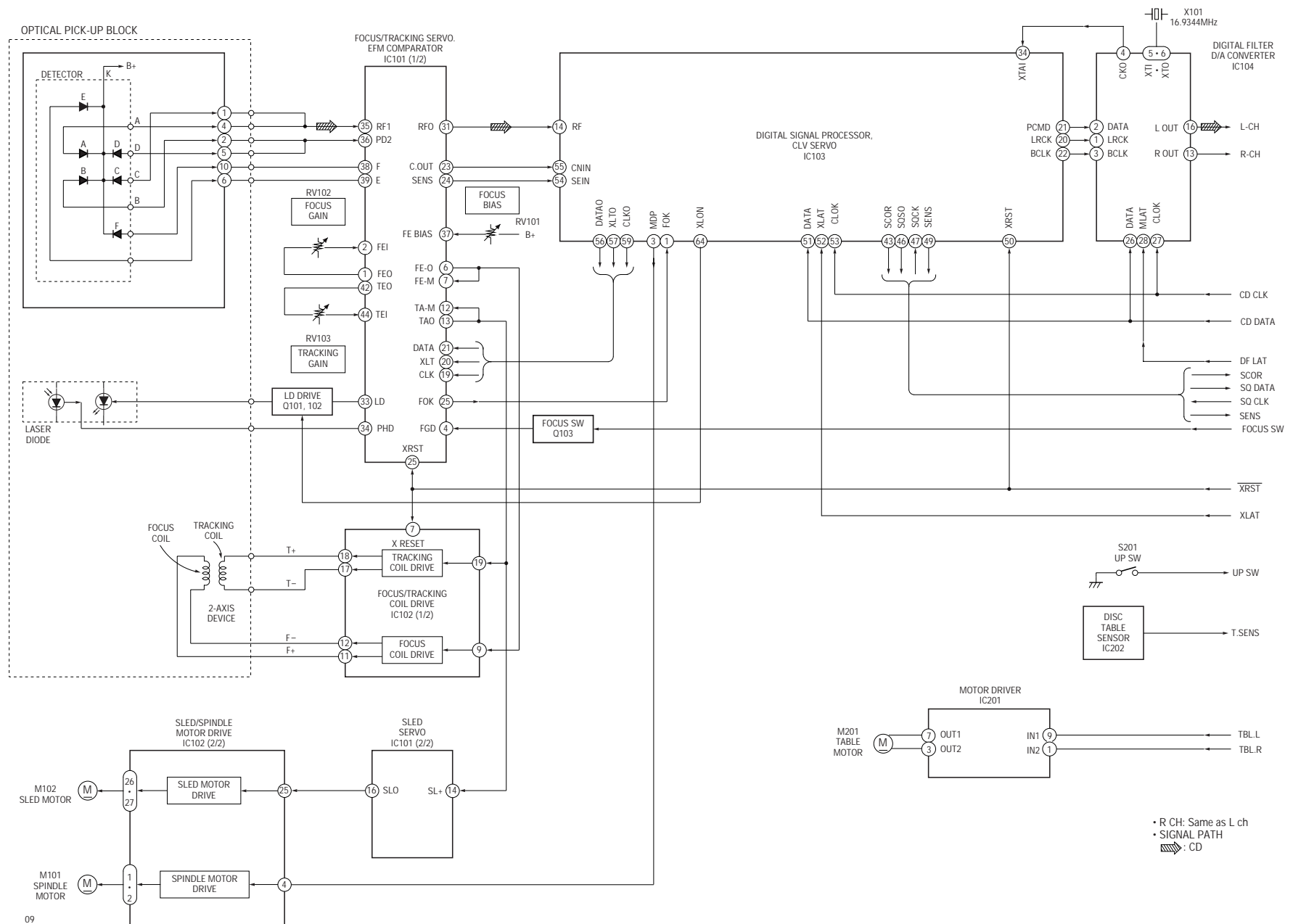
SECTION 6
DIAGRAMS

6-1. BLOCK DIAGRAMS
—TUNER SECTION—

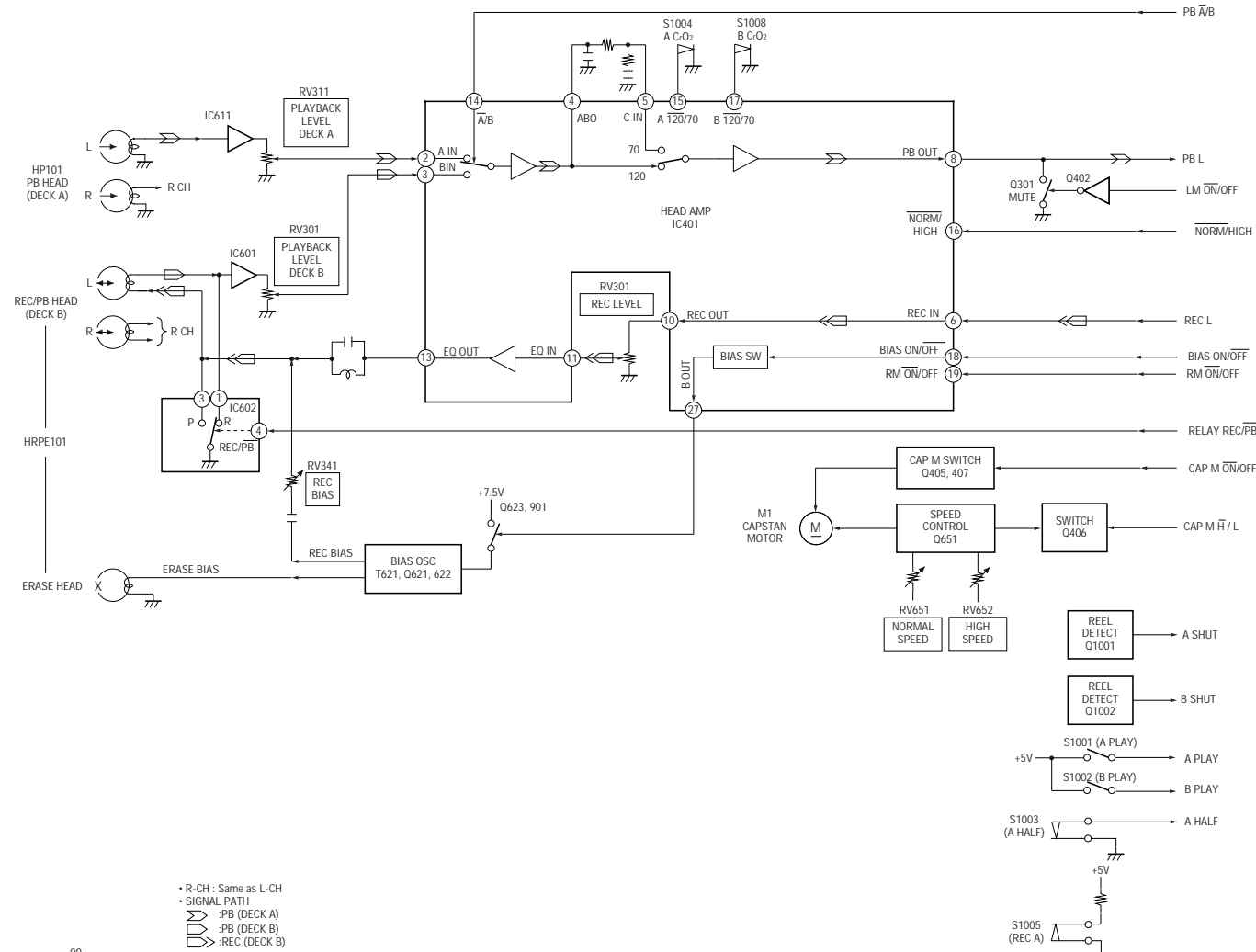


09

—CD SECTION—

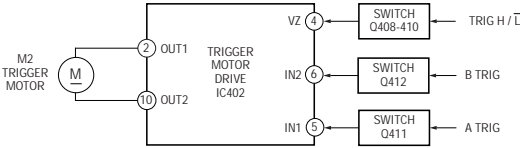


C
MAIN
SECTION
(Page 21)

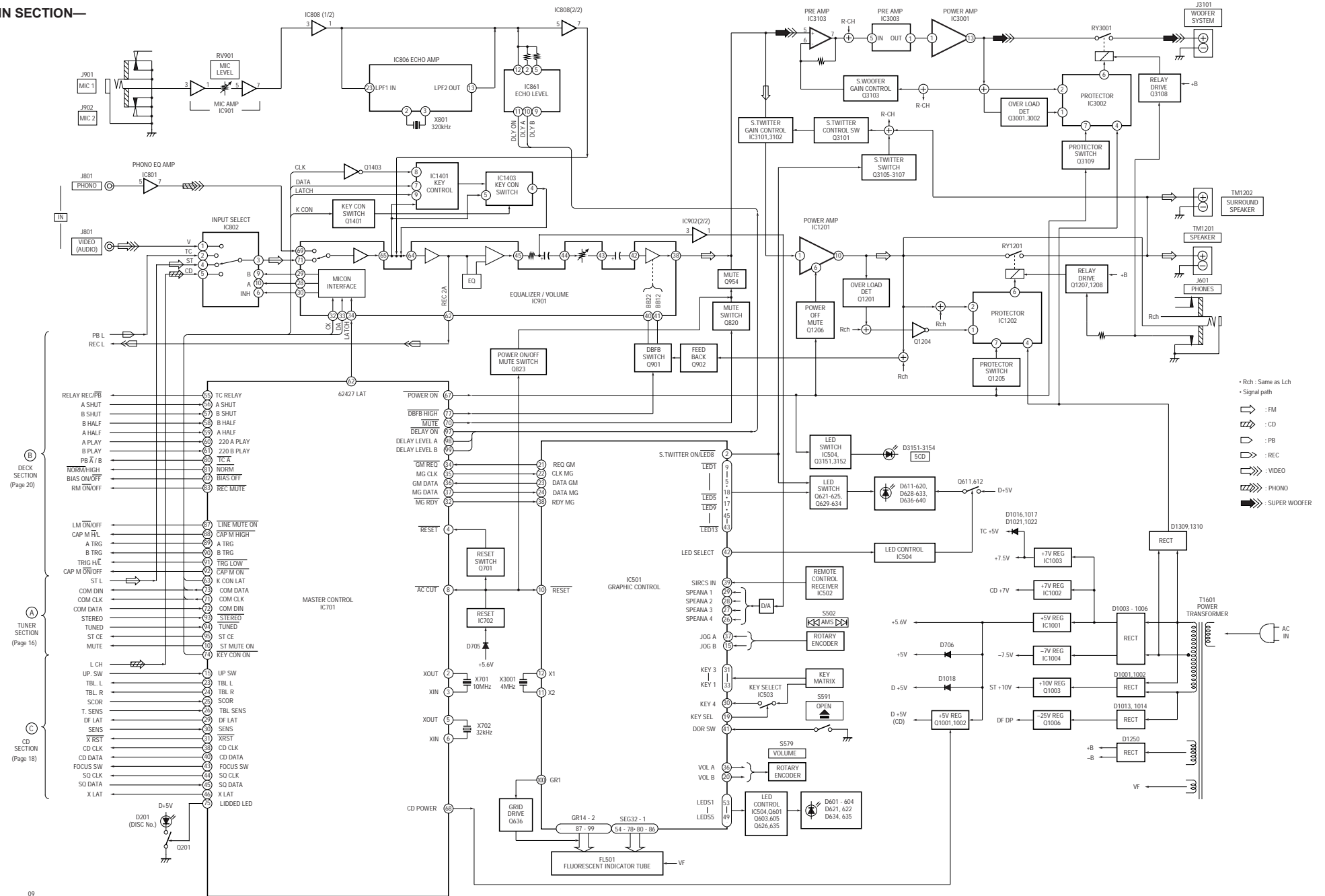


09

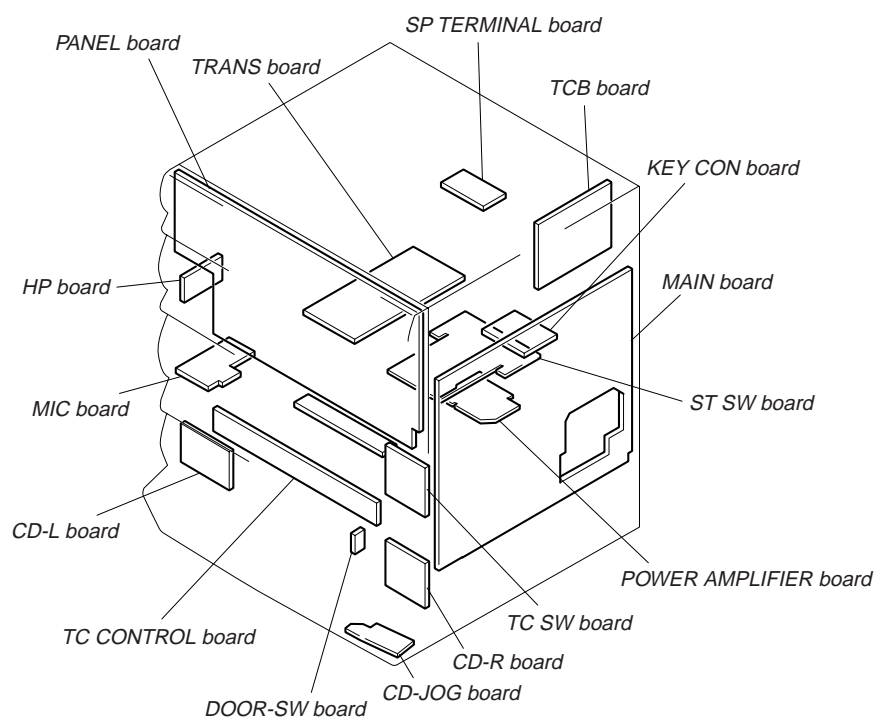
Ⓑ
MAIN
SECTION
(Page 21)



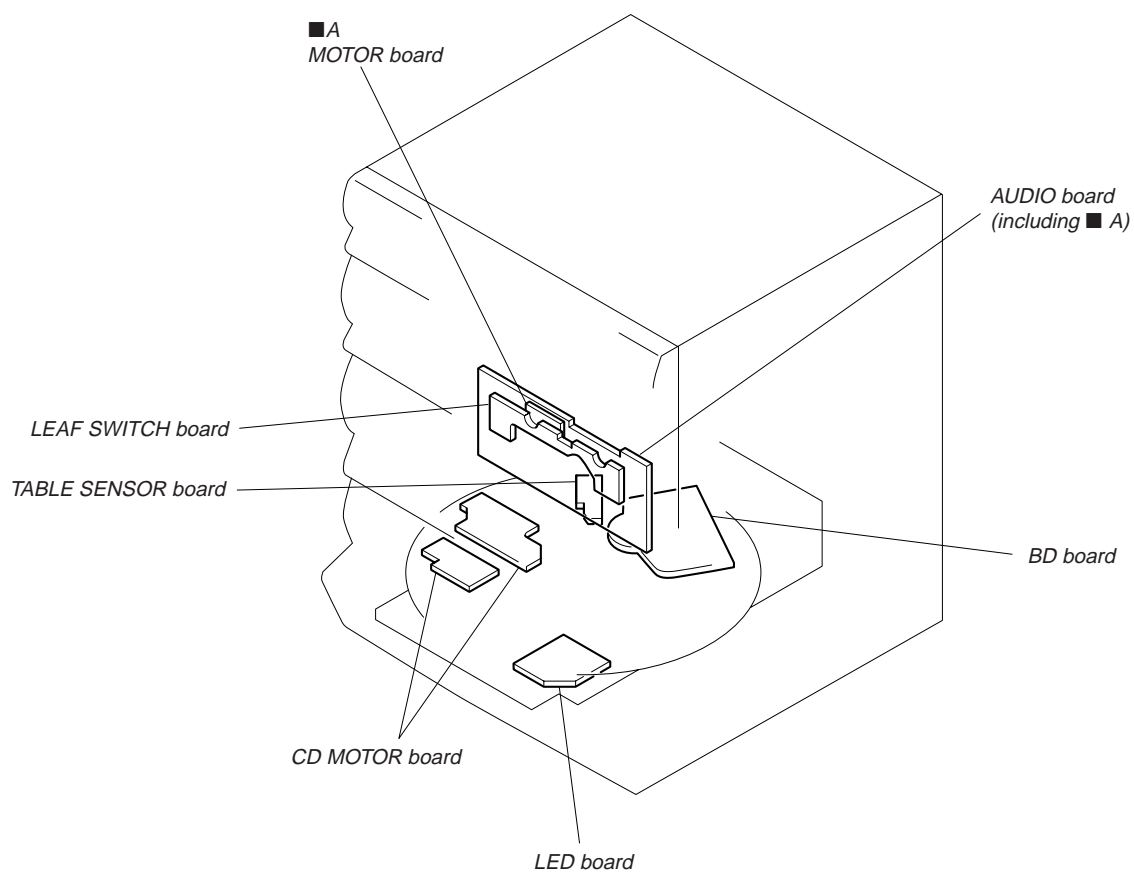
—MAIN SECTION—



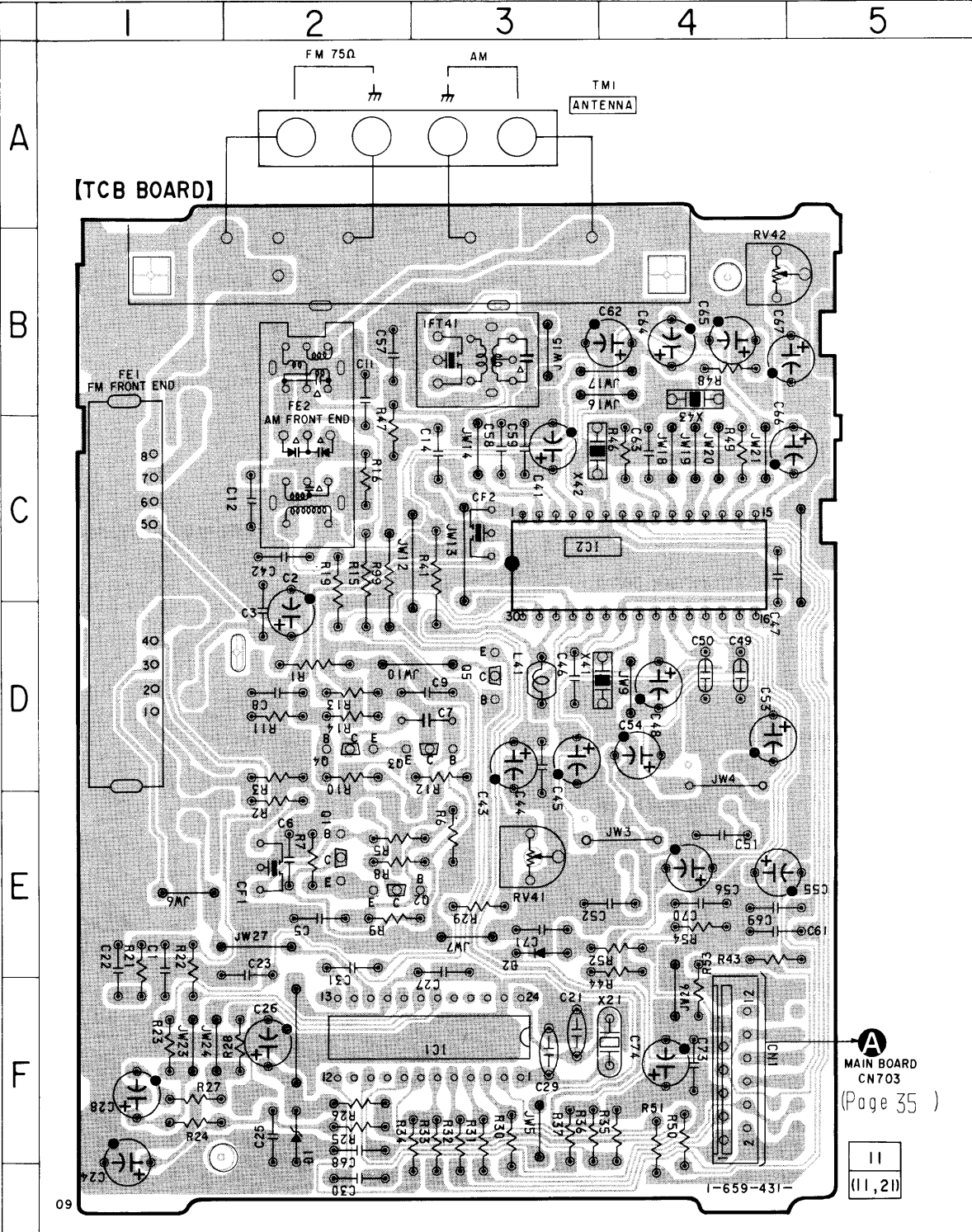
6-2. CIRCUIT BOARDS LOCATION



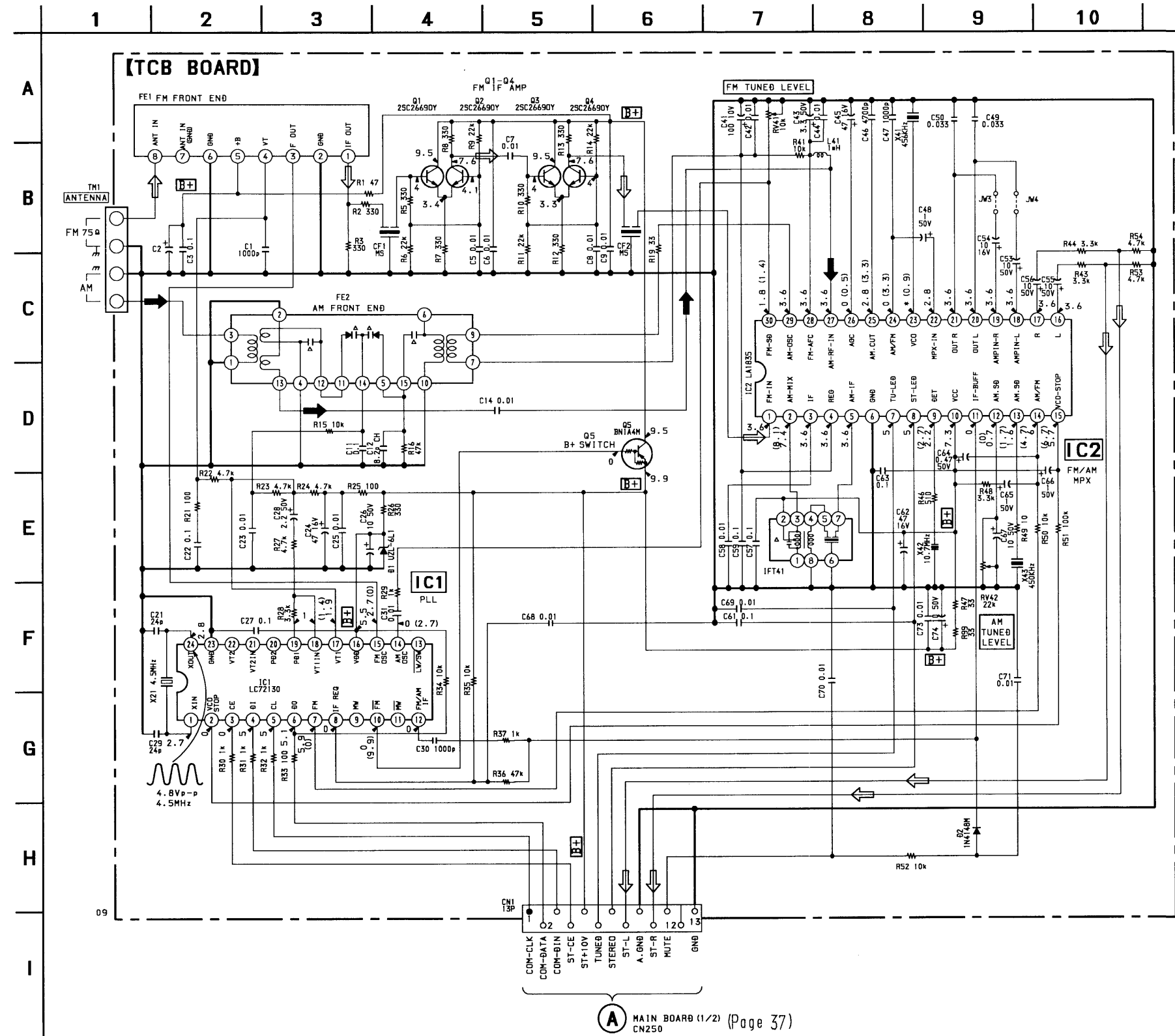
Note: ■A is including in AUDIO board.



6-3. PRINTED WIRING BOARD — TUNER SECTION —
• See page 23 for Circuit Boards Location.



6-4. SCHEMATIC DIAGRAM — TUNER SECTION —
• See page 67 for IC Block Diagrams.



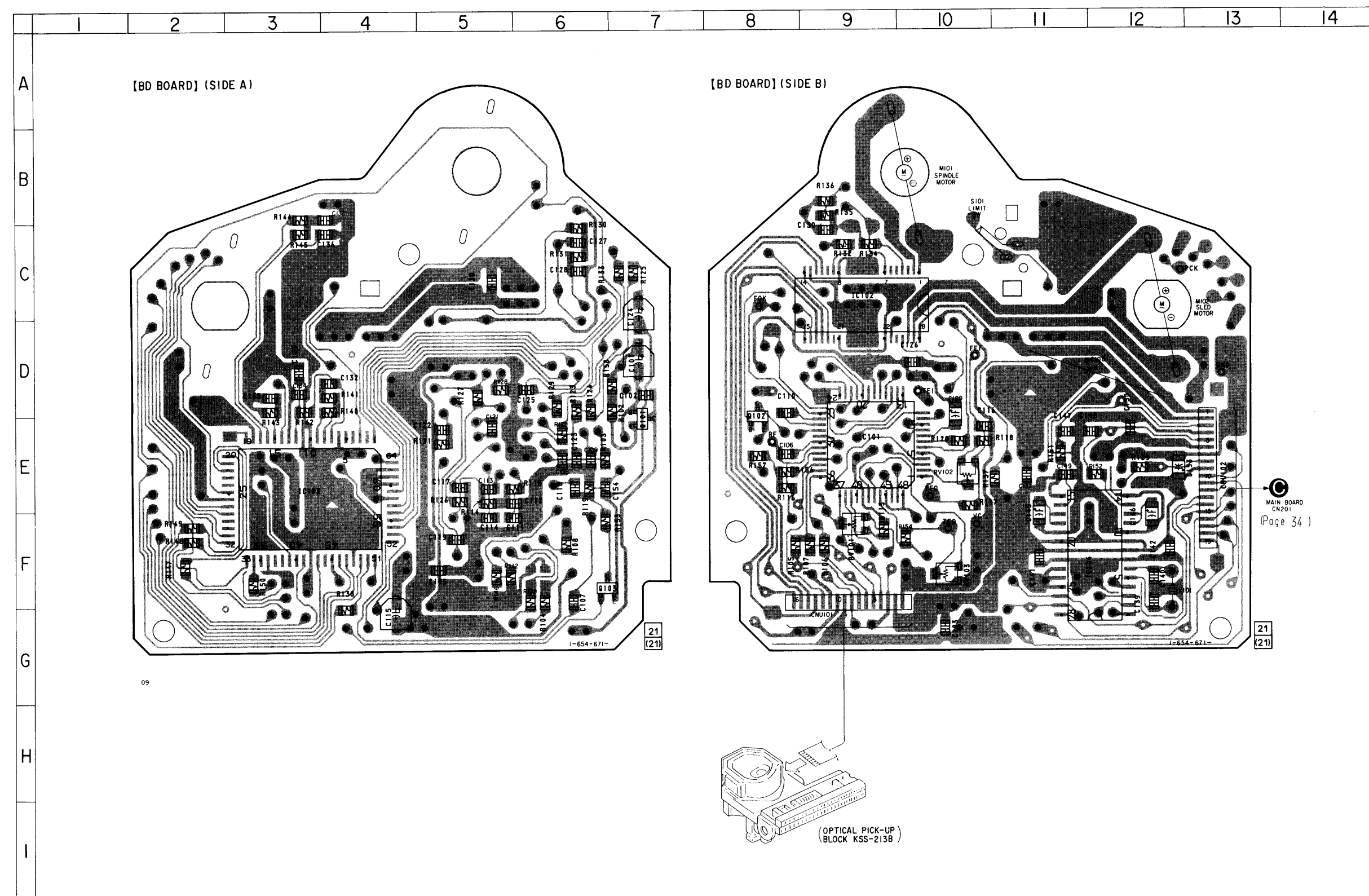
NOTE

- All capacitors are in μF unless otherwise noted, $\text{pF} : \mu\text{F}$ 50W or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- Δ : internal component.
- \square : panel designation.
- **B+** : B+ Line.
- \square : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark: FM
(): AM
* : can not be measured.
- Voltages are taken with a VOM (Input impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path.
 \Rightarrow : FM
 \Rightarrow : AM

6-5. PRINTED WIRING BOARD — BD SECTION —
• See page 23 for Circuit Boards Location.

• Semiconductor Location

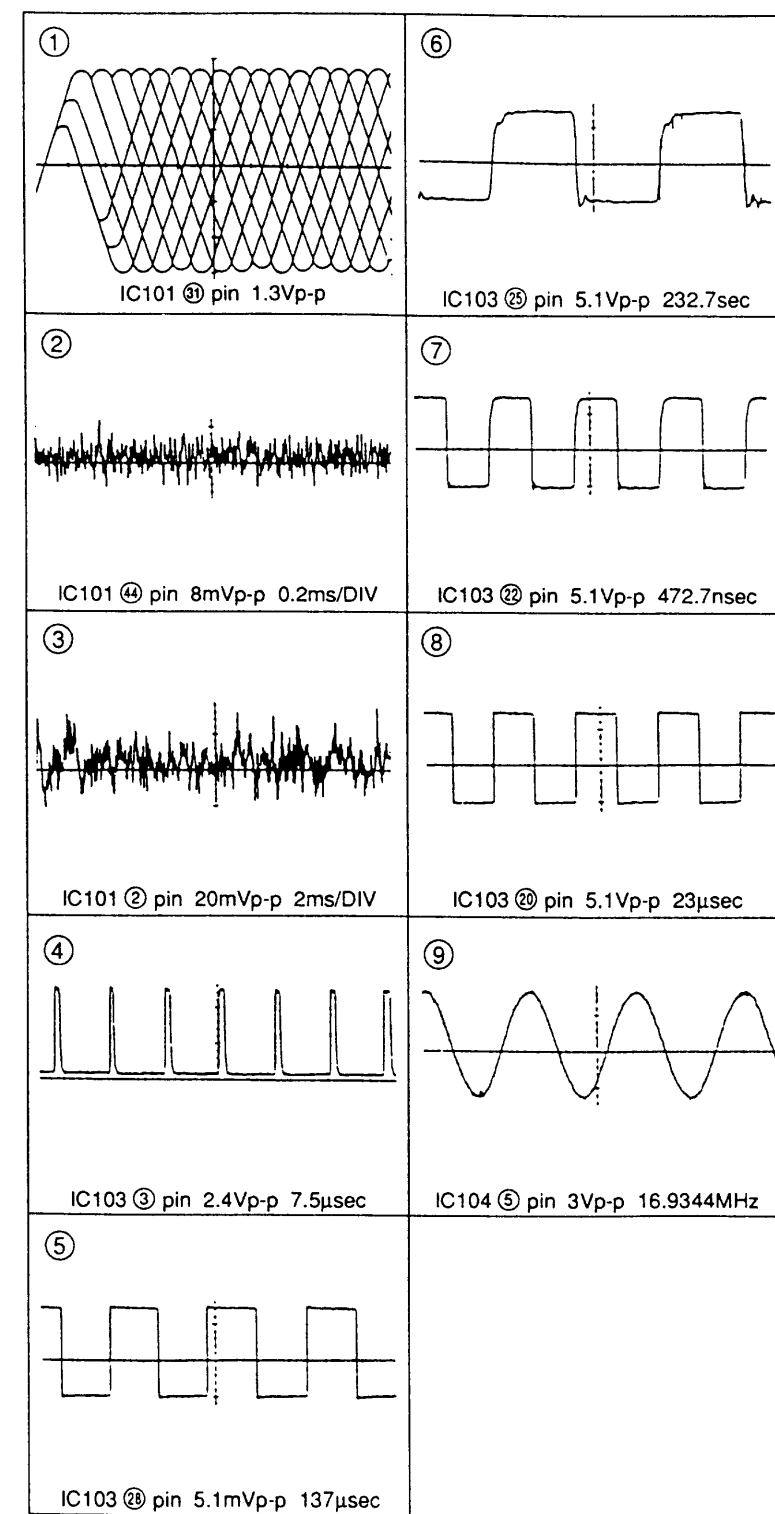
Ref. No.	Location
IC101	D-3
IC102	D-9
IC103	B-3
Q101	A-9



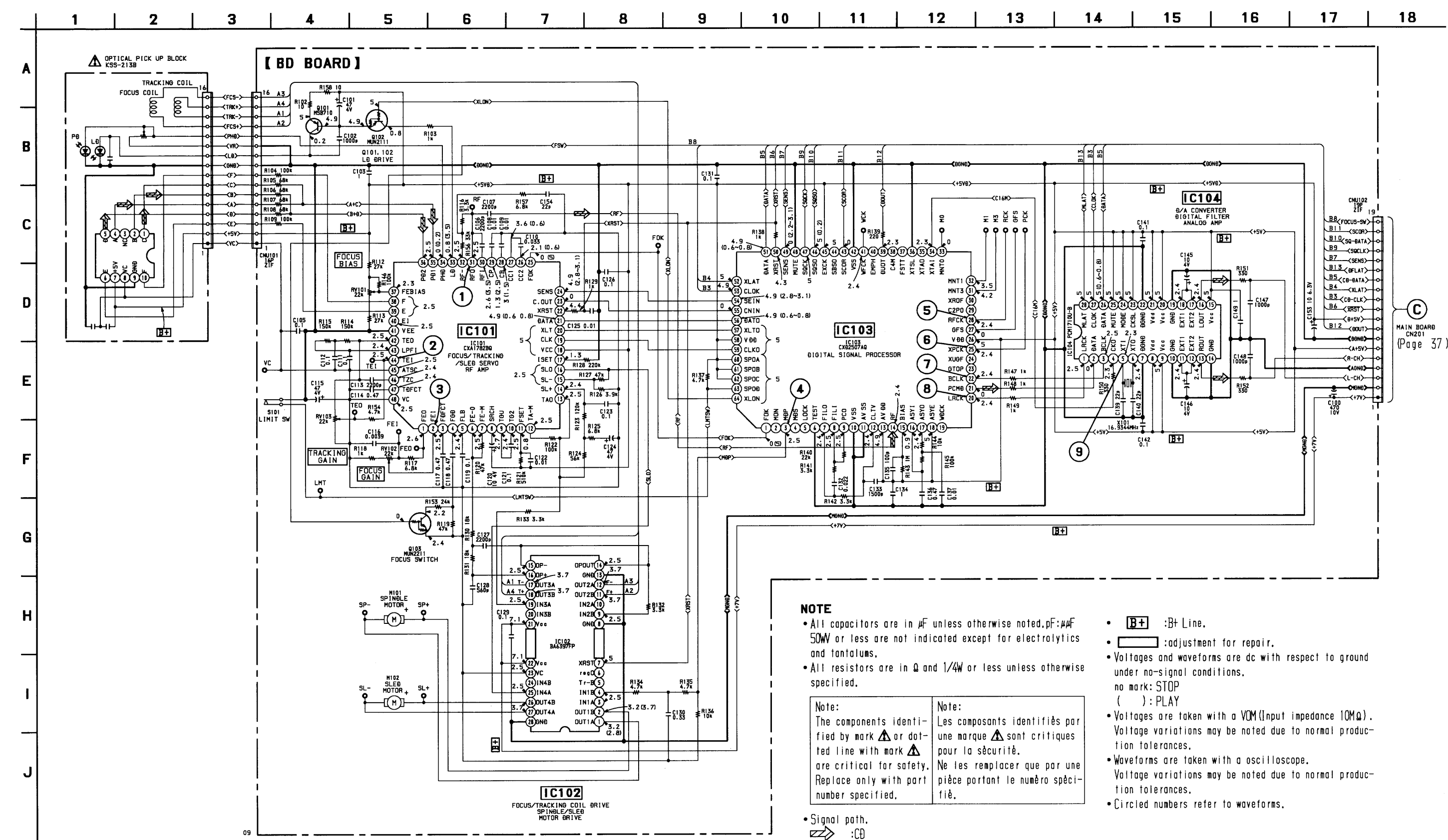
Note:

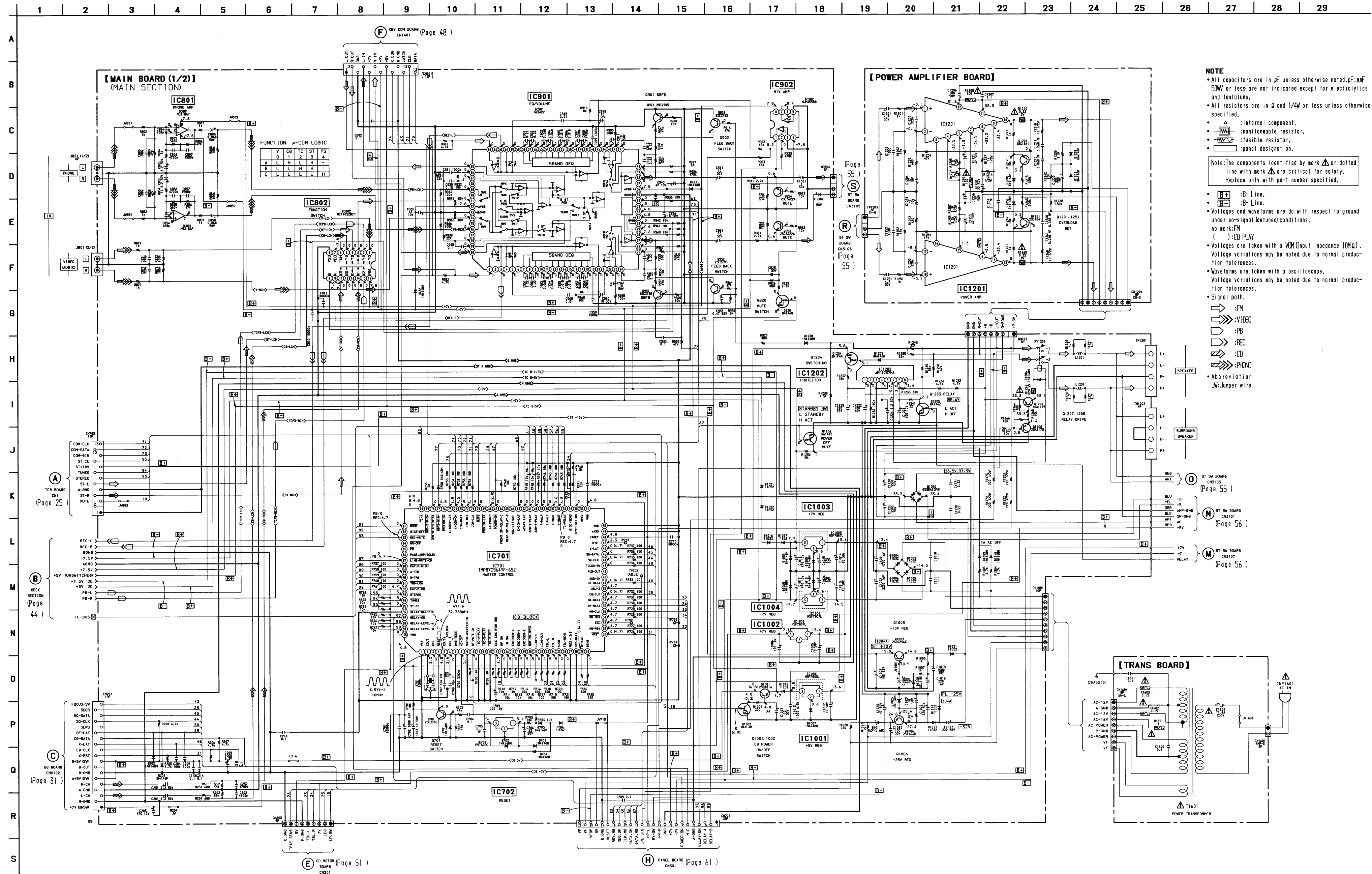
- : parts extracted from the component side.
- : Through hole.
- : Pattern from the side which enable seeing. (The other layers' patterns are not indicated.)

• Waveforms

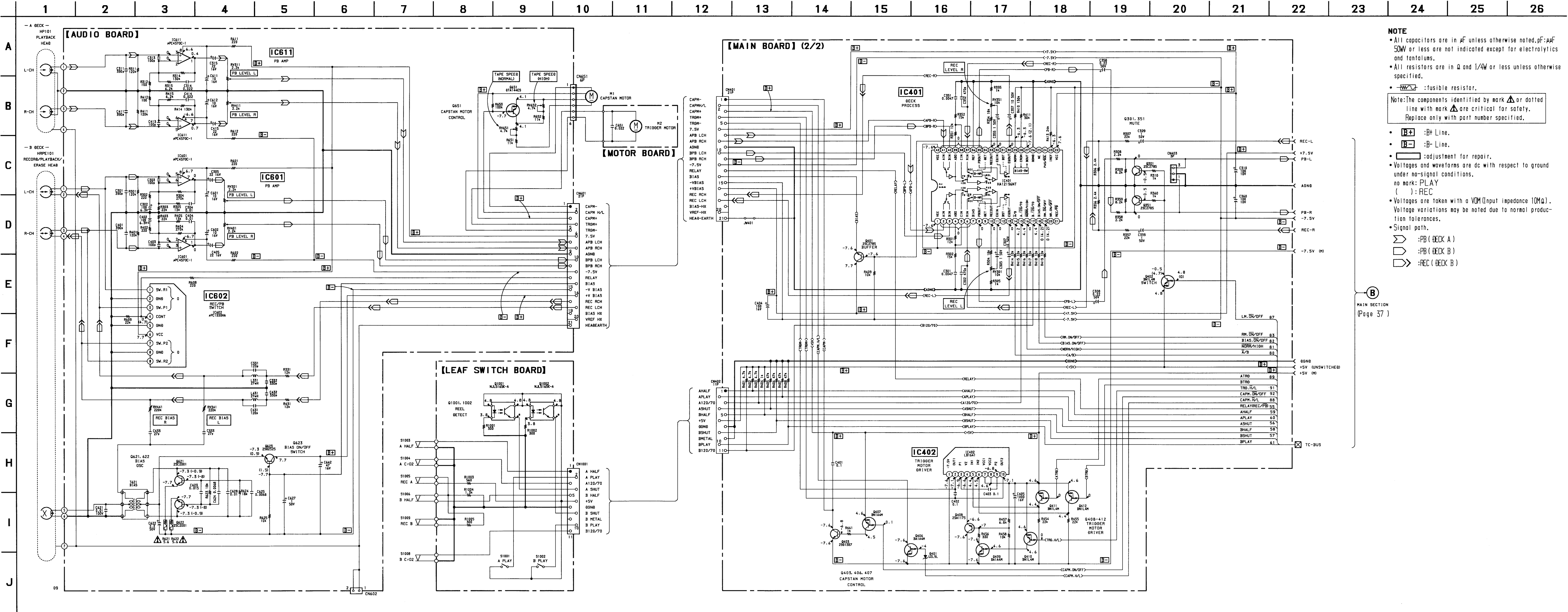


6-6. SCHEMATIC DIAGRAM — BD SECTION —
• See page 68 for IC Block Diagrams.

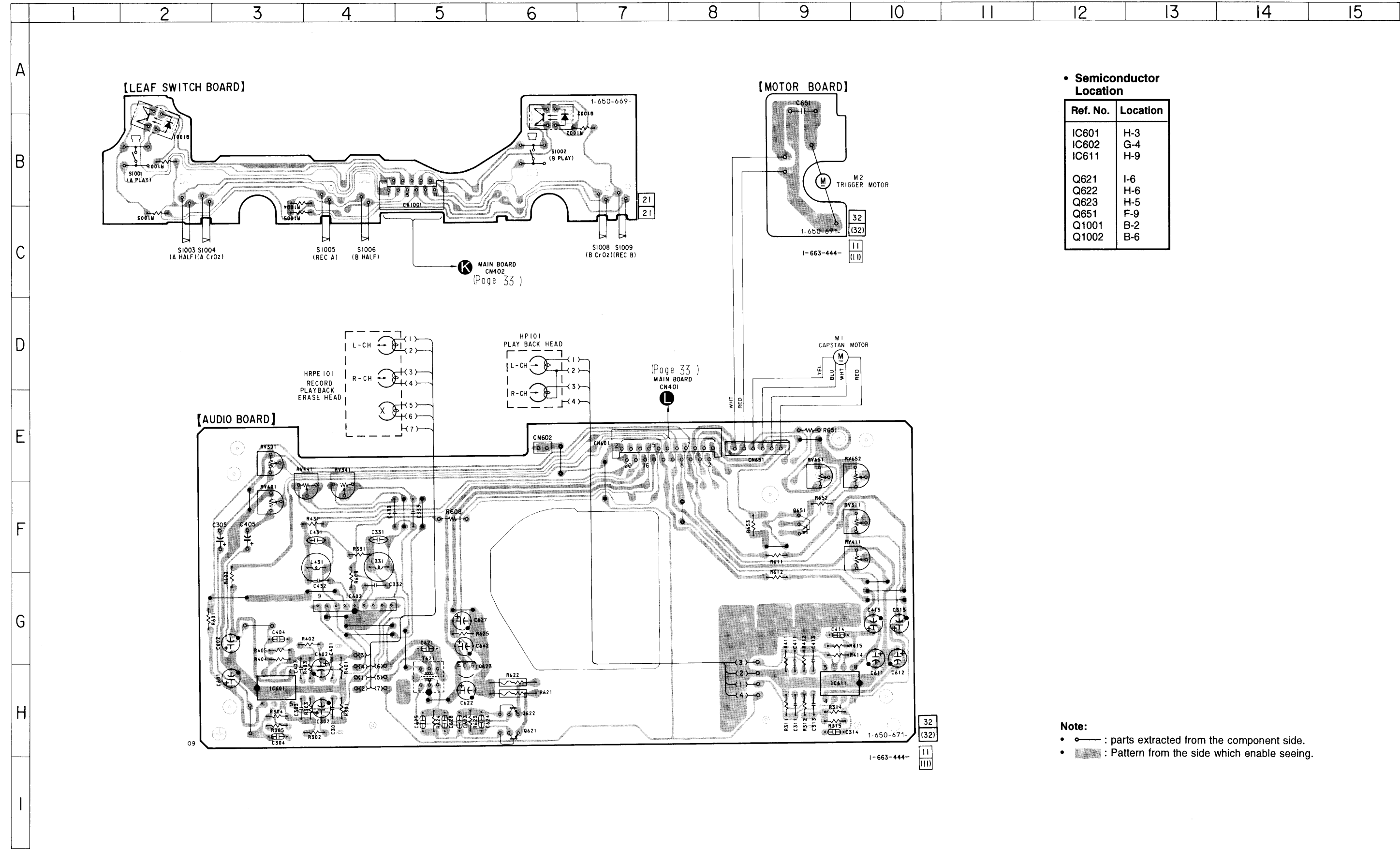




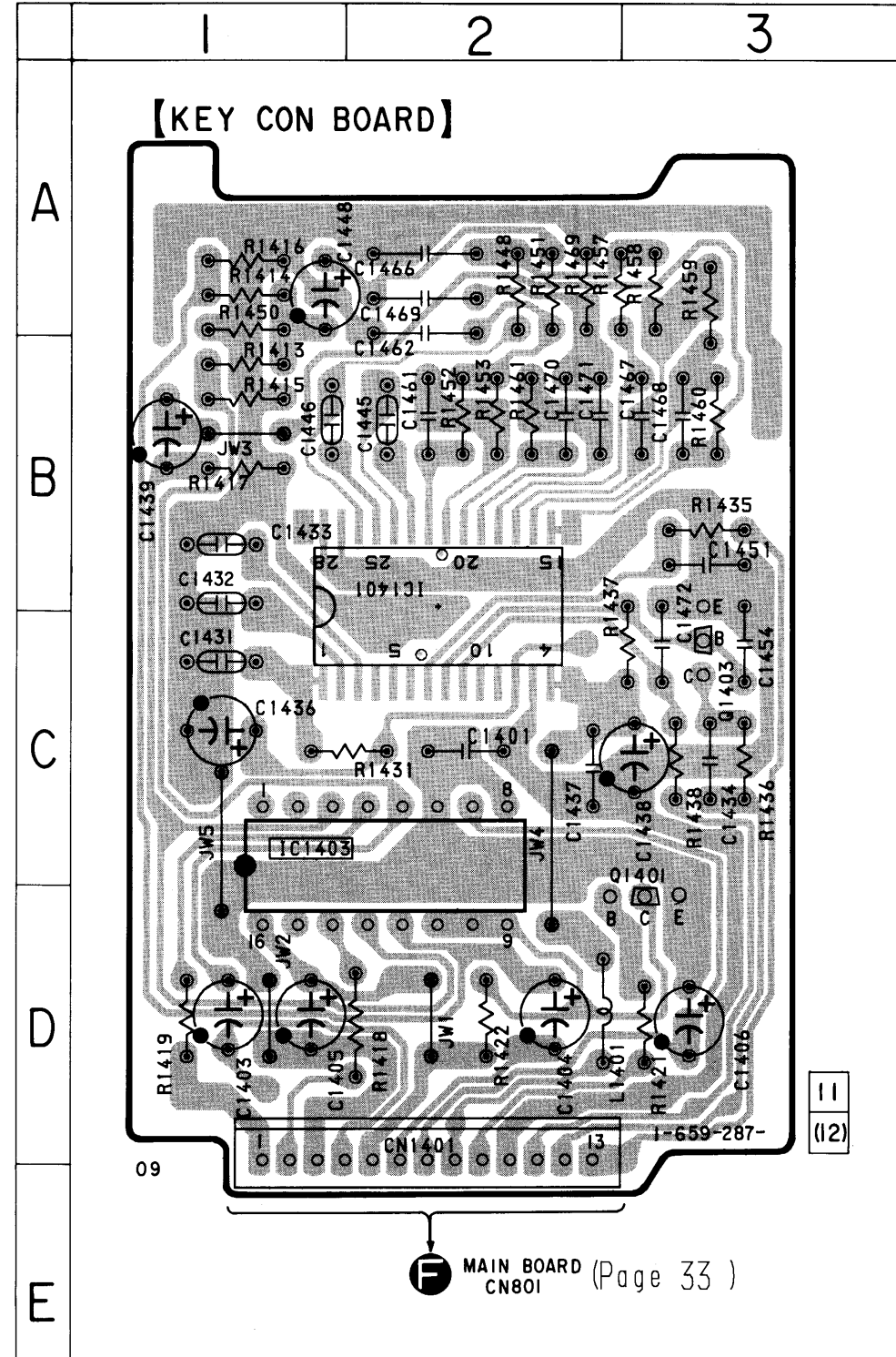
6-9. SCHEMATIC DIAGRAM — DECK SECTION —
• See page 33 for Printed Wiring Board. (MAIN)
• See page 71 for IC Block Diagrams.



6-10. PRINTED WIRING BOARD — DECK SECTION —
• See page 23 for Circuit Boards Location.



6-11. PRINTED WIRING BOARD — KEY CON SECTION —
• See page 23 for Circuit Boards Location.

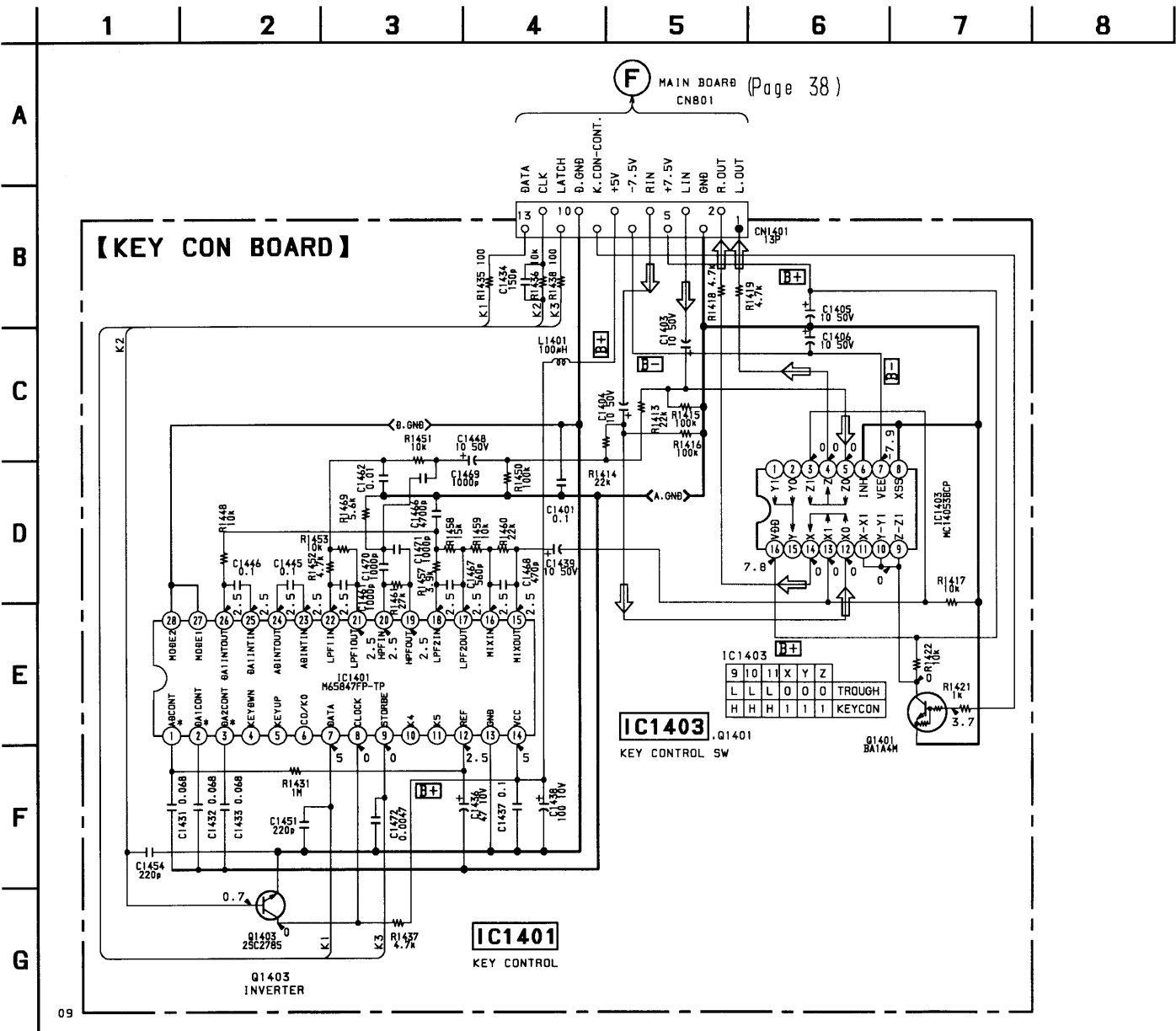


Note:
• : parts extracted from the component side.
• : Pattern from the side which enable seeing.

• Semiconductor Location

Ref. No.	Location
IC1401	B-2
IC1403	C-1
Q1401	D-3
Q1403	C-3

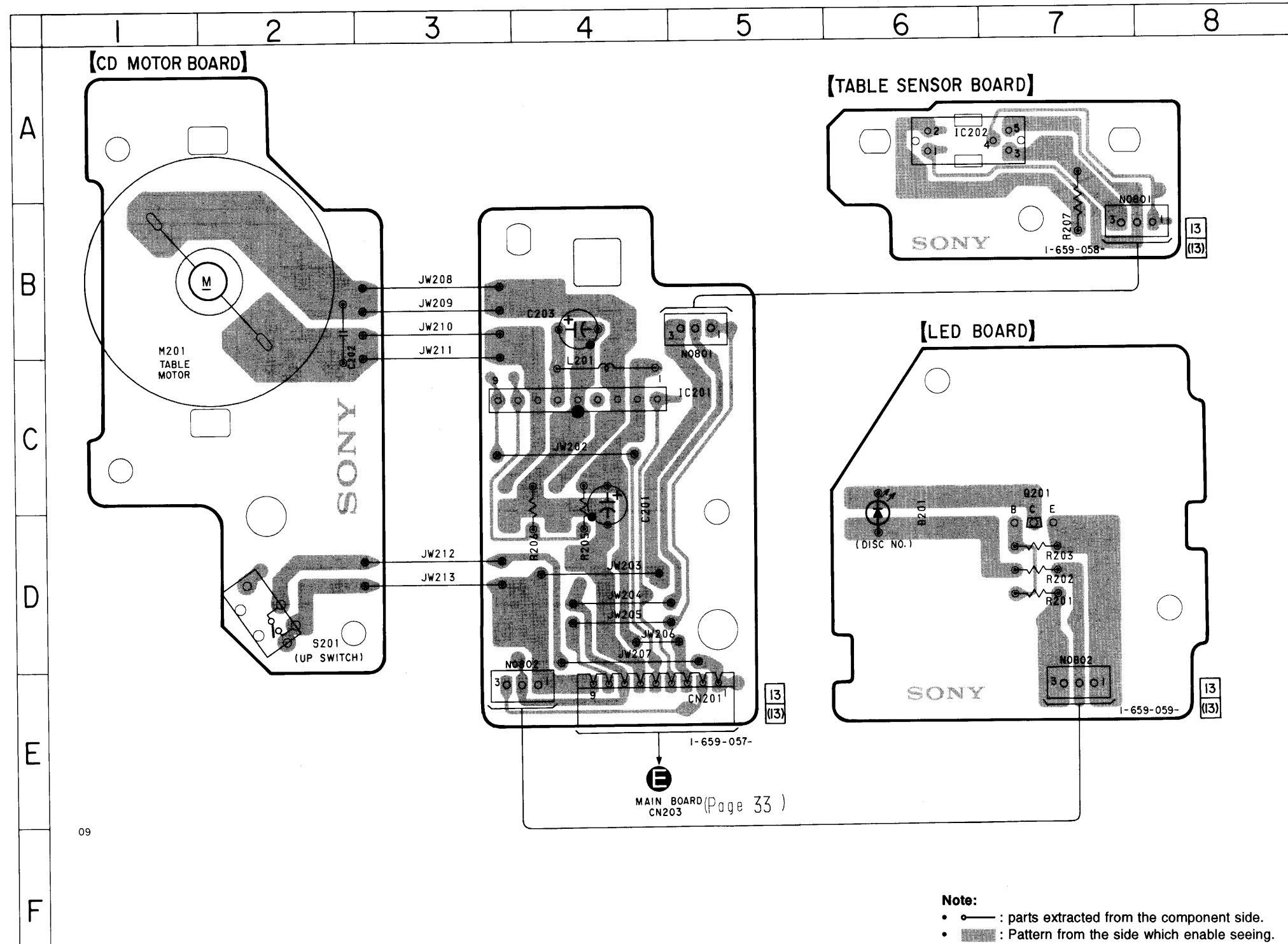
6-12. SCHEMATIC DIAGRAM — KEY CON SECTION —
• See page 72 for IC Block Diagrams.



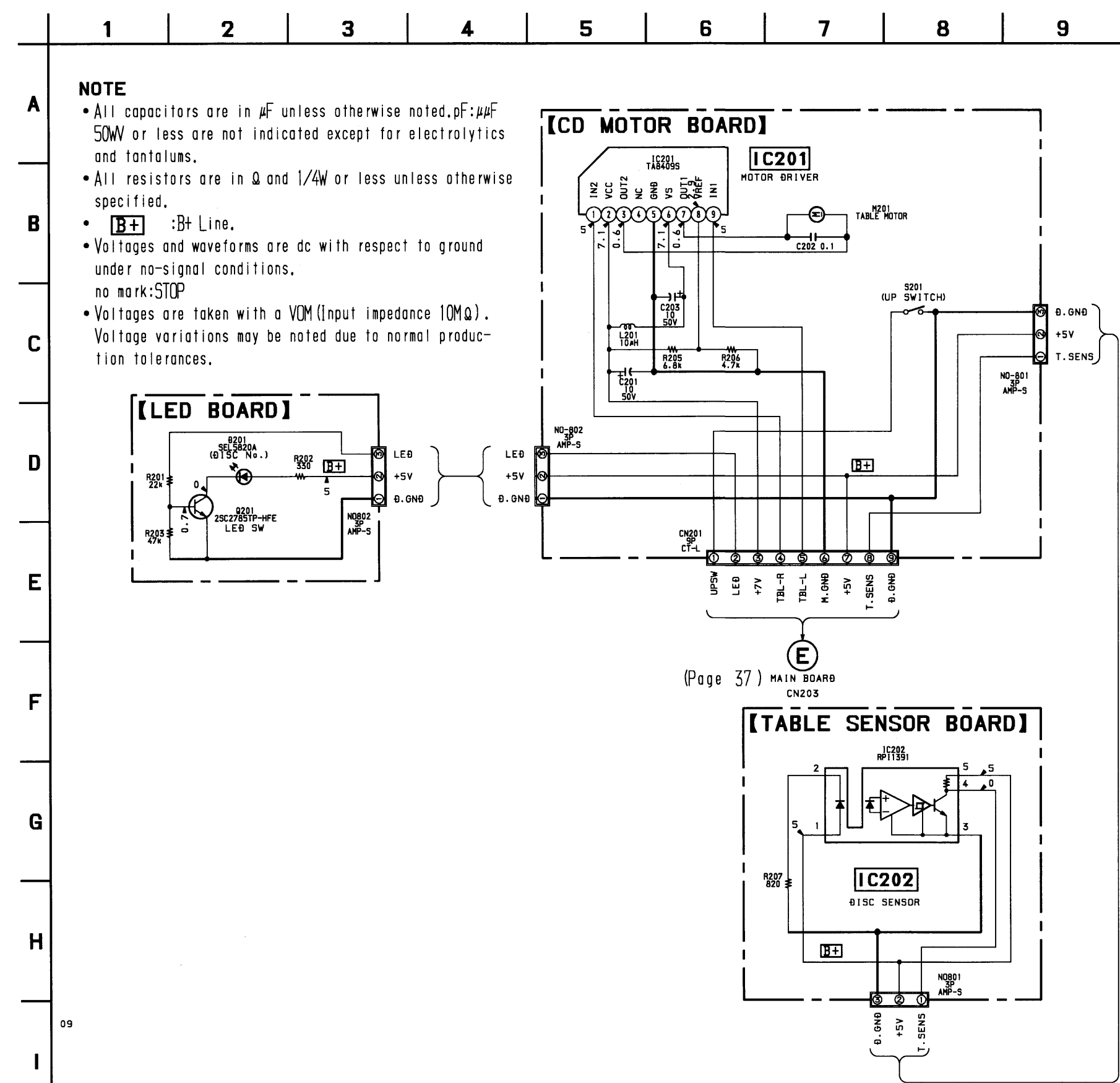
NOTE

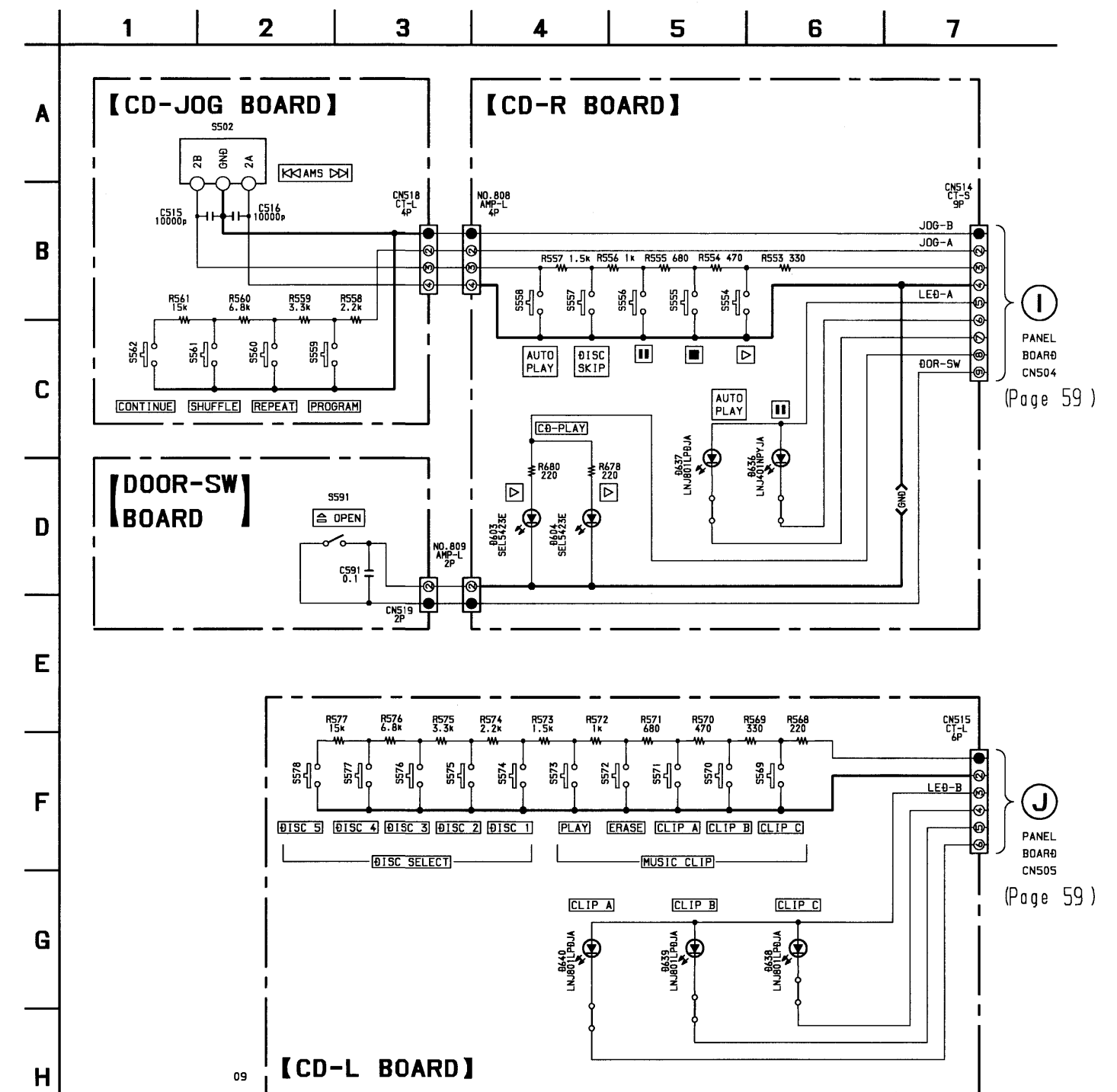
- All capacitors are in μF unless otherwise noted, pF : μF
50W or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- **B+** :B+ Line.
- **B-** :B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark:FM
* :can not be measured.
- Voltages are taken with a VOM (Input impedance $10\text{M}\Omega$).
Voltage variations may be noted due to normal production tolerances.
- Signal path.
→ :FM

6-13. PRINTED WIRING BOARD — CD MOTOR SECTION —
• See page 23 for Circuit Boards Location.



6-14. SCHEMATIC DIAGRAM — CD MOTOR SECTION —

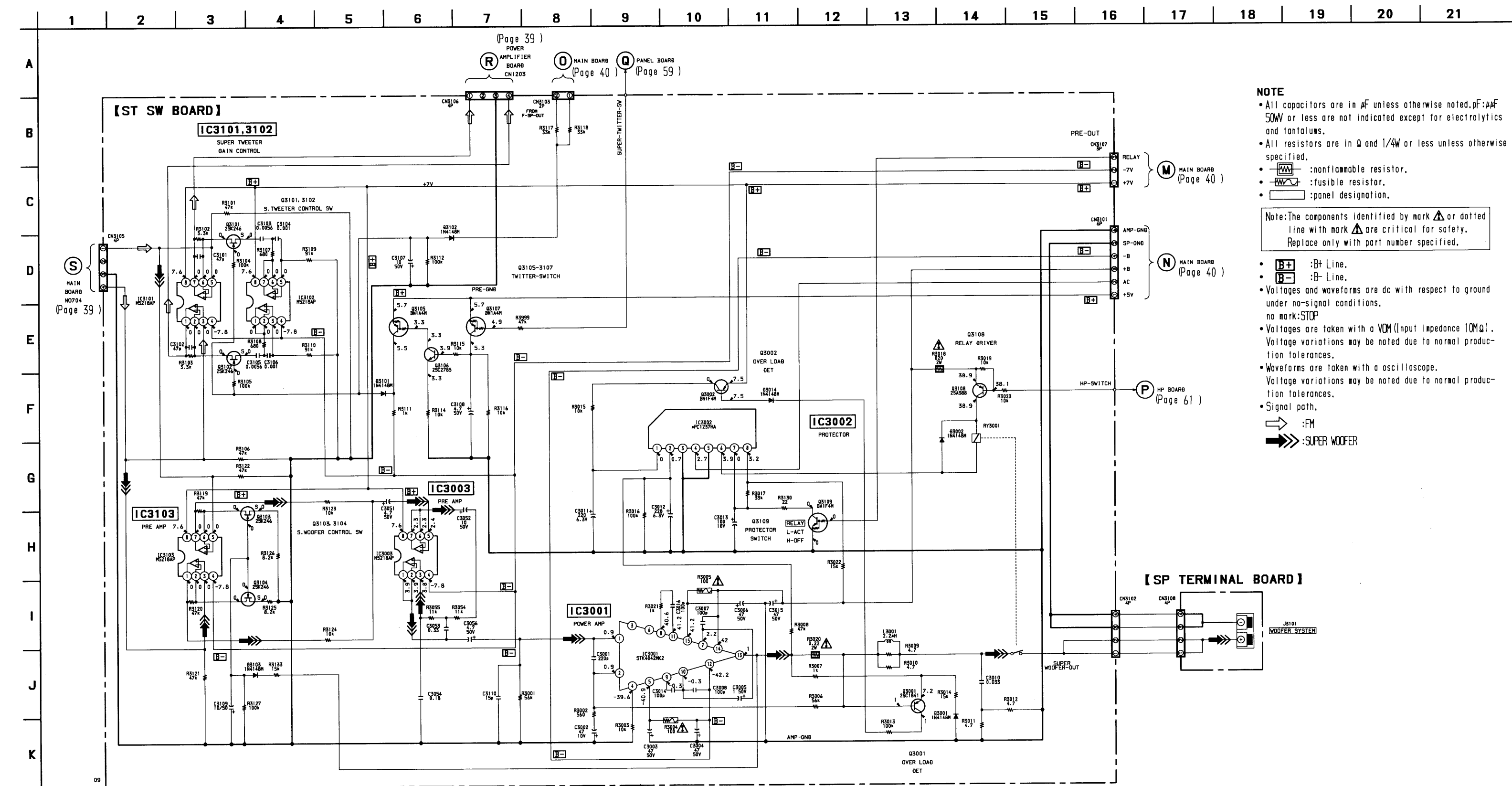




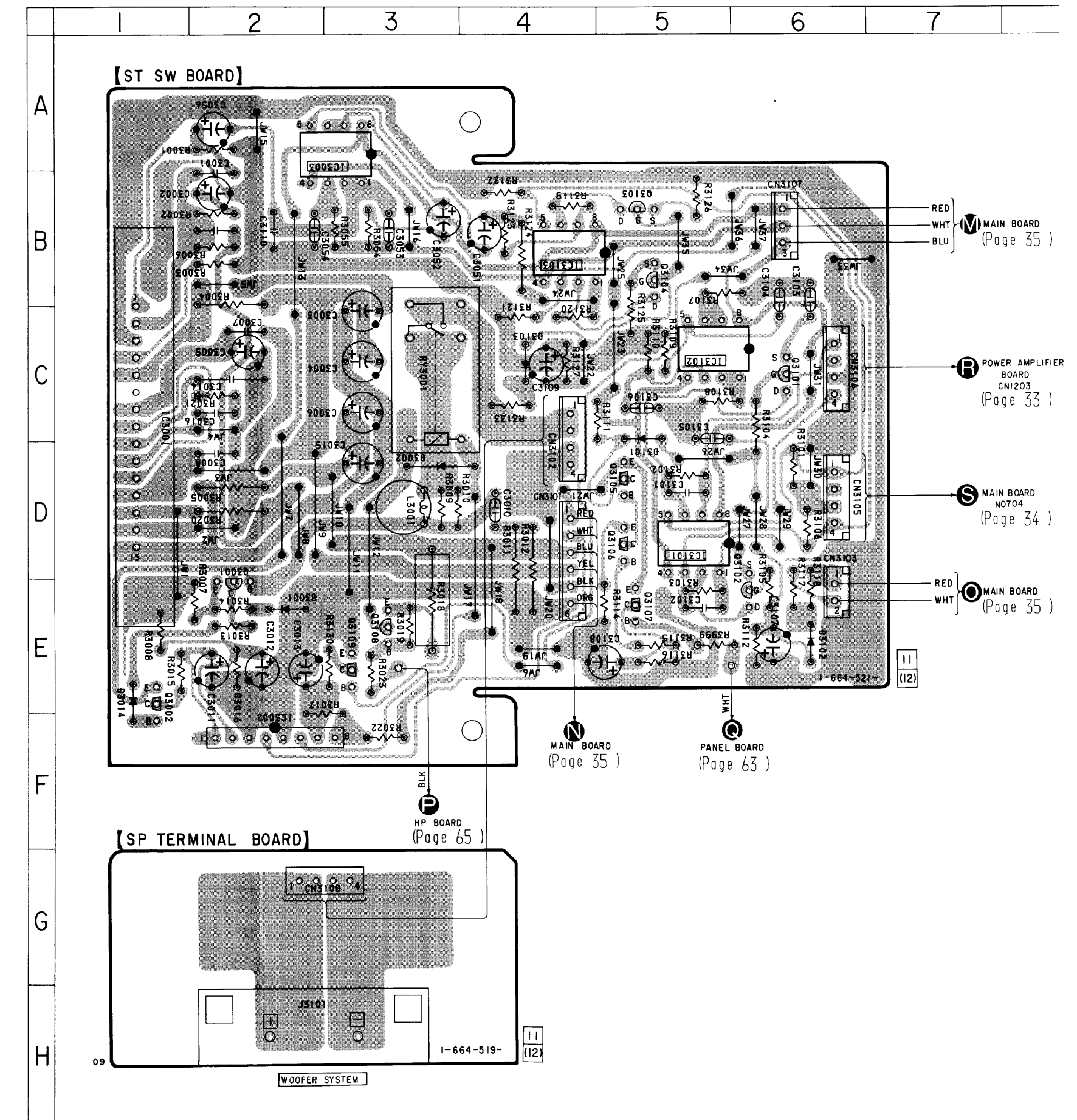
- All capacitors are in μF unless otherwise noted. pF: μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- : panel designation.

— 54 —

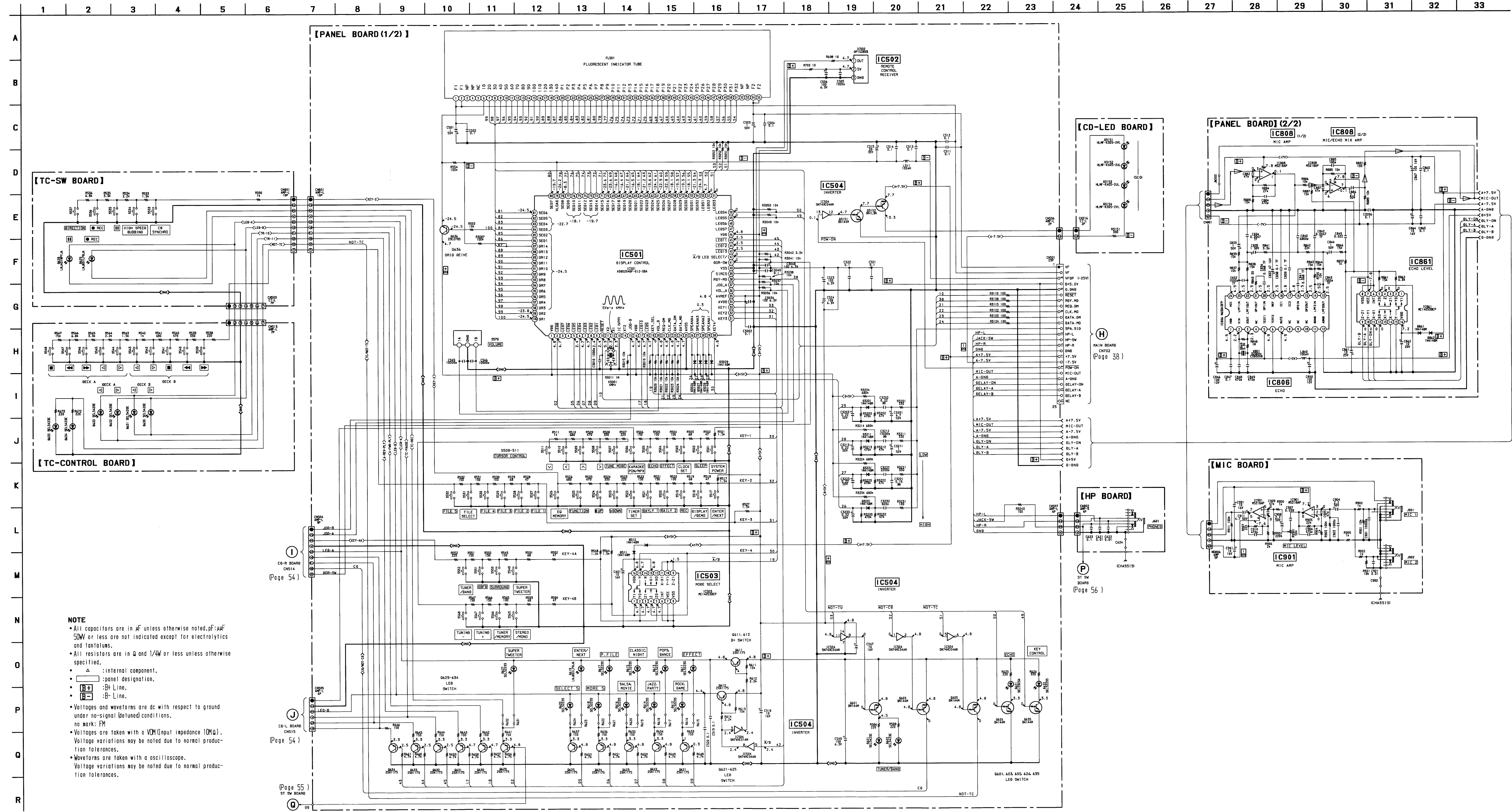
6-17. SCHEMATIC DIAGRAM — ST SW SECTION —



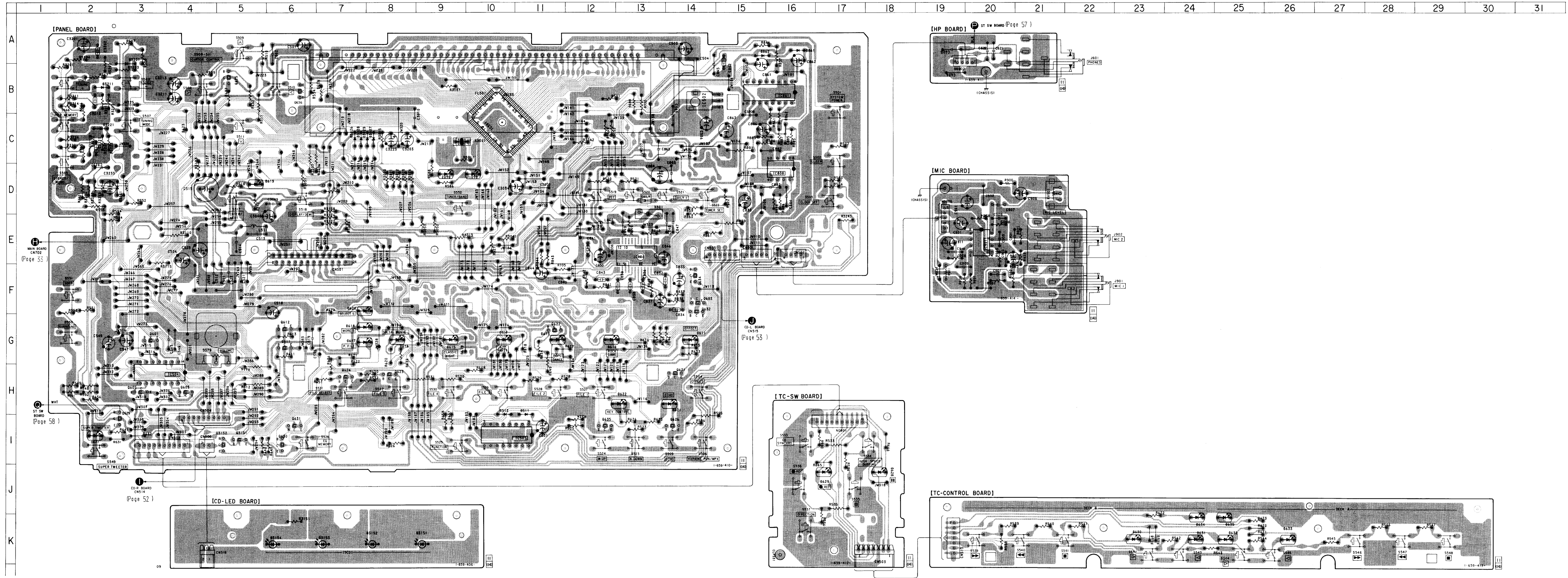
6-18. PRINTED WIRING BOARD — ST SW SECTION —
• See page 23 for Circuit Boards Location.



6-19. SCHEMATIC DIAGRAM — PANEL SECTION —
• See page 73 for IC Pin Functions.



6-20. PRINTED WIRING BOARD — PANEL SECTION —
• See page 23 for Circuit Boards Location.



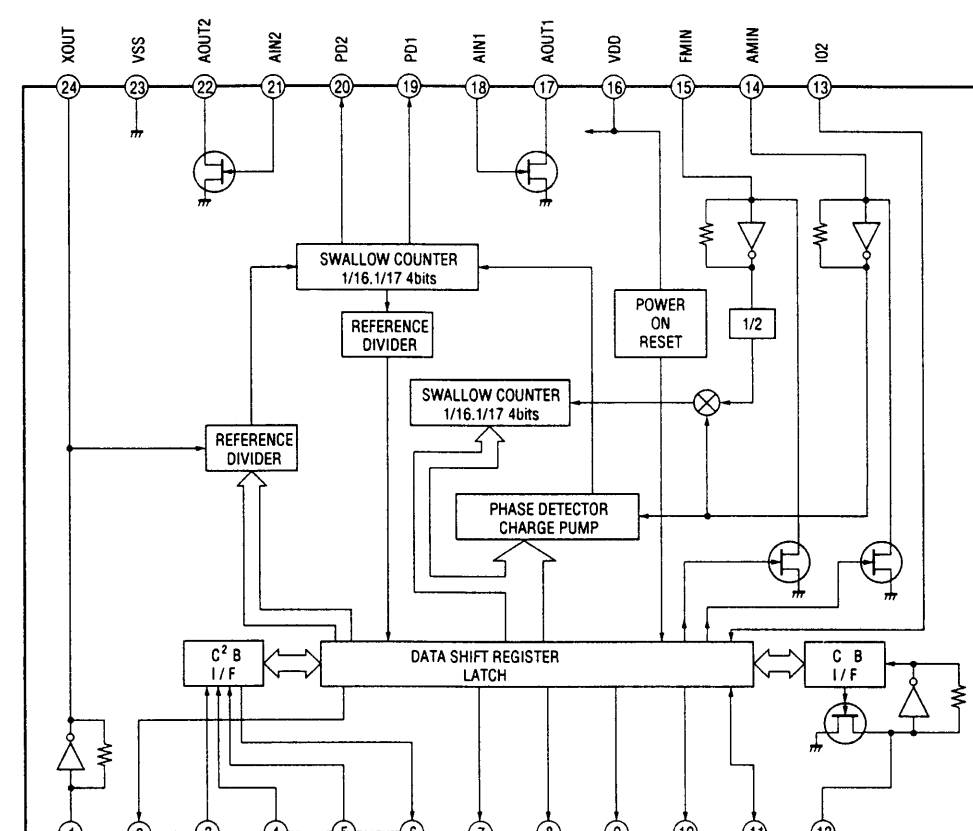
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D511	H-11	D3201	A-3
D512	H-10	D3211	B-2
D601	D-10	D3221	C-2
D602	D-9	D3231	D-3
D611	G-14		
D612	G-12	IC501	C-10
D613	G-11	IC502	B-14
D614	G-10	IC503	I-11
D615	G-9	IC504	H-4
D616	G-8	IC806	E-13
D617	G-7	IC808	D-16
D618	G-7	IC861	B-16
D619	D-5	IC901	E-20
D620	F-7		
D621	H-14	Q601	G-3
D622	H-13	Q603	H-4
D627	I-2	Q605	H-3
D628	J-18	Q611	G-6
D629	J-17	Q612	G-6
D630	K-23	Q621	H-14
D631	K-24	Q622	G-11
D632	K-25	Q623	H-8
D633	K-26	Q624	H-7
D634	K-24	Q625	B-5
D635	K-25	Q626	I-14
D861	A-16	Q629	H-3
D862	A-16	Q630	I-6
D3026	C-7	Q631	I-6
D3027	C-8	Q632	F-14
D3028	C-7	Q633	F-14
D3029	C-7	Q634	F-14
D3151	K-9	Q635	I-12
D3152	K-8	Q636	B-6
D3153	K-7	Q3151	I-5
D3154	K-6	Q3152	I-5

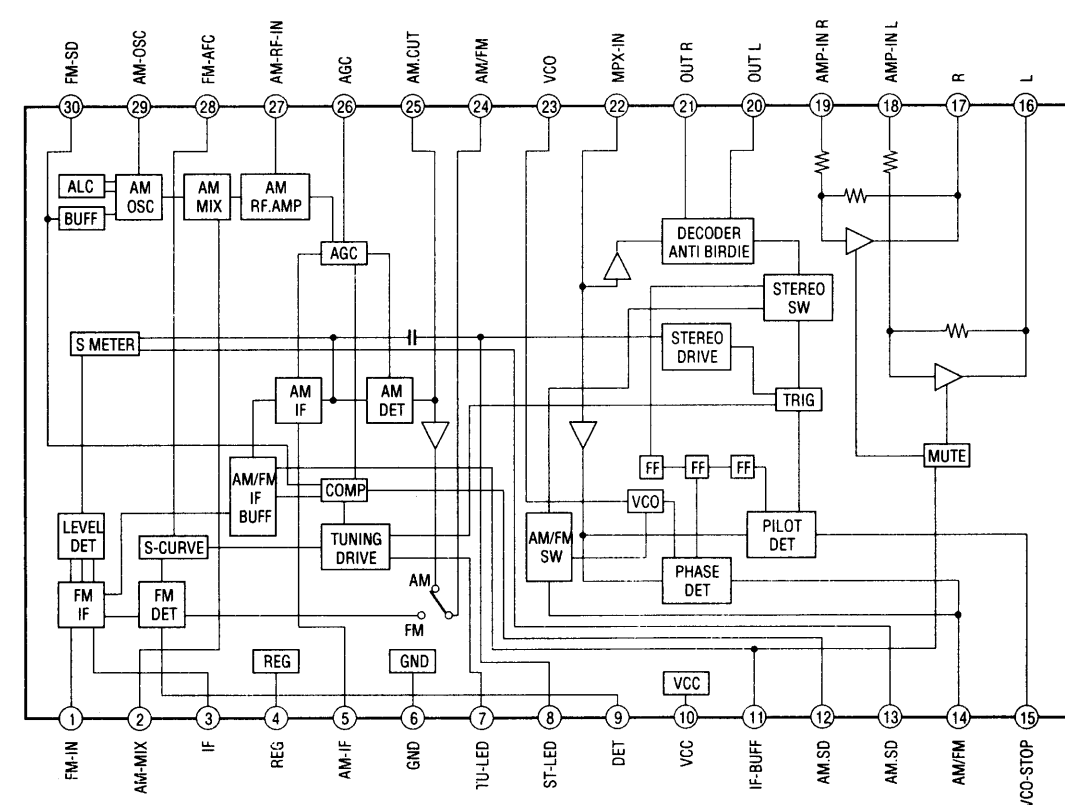
Note:
• : parts extracted from the component side.
• Δ : internal component.
• : Pattern from the side which enable seeing.

6-21. IC BLOCK DIAGRAMS

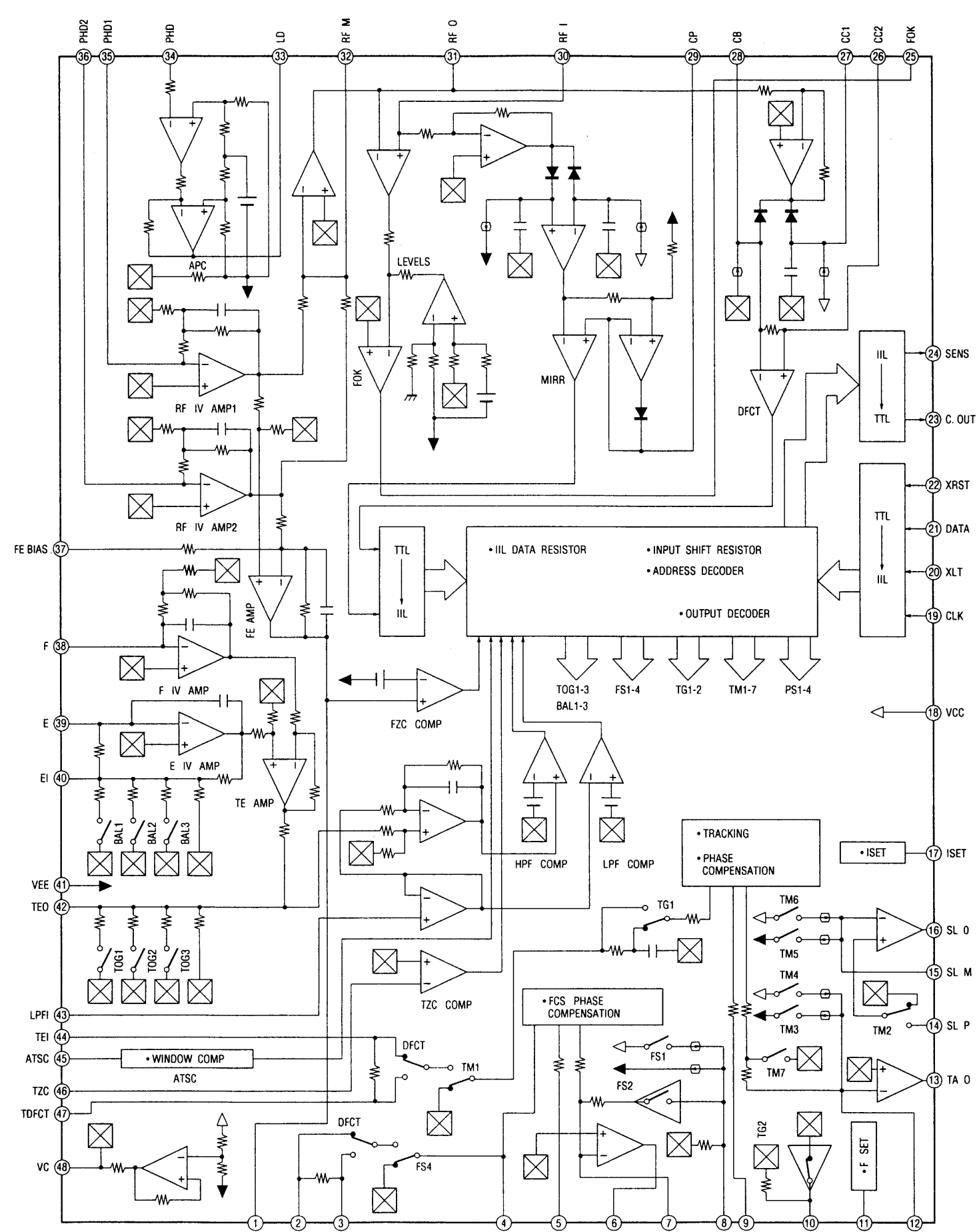
IC1 LC72130



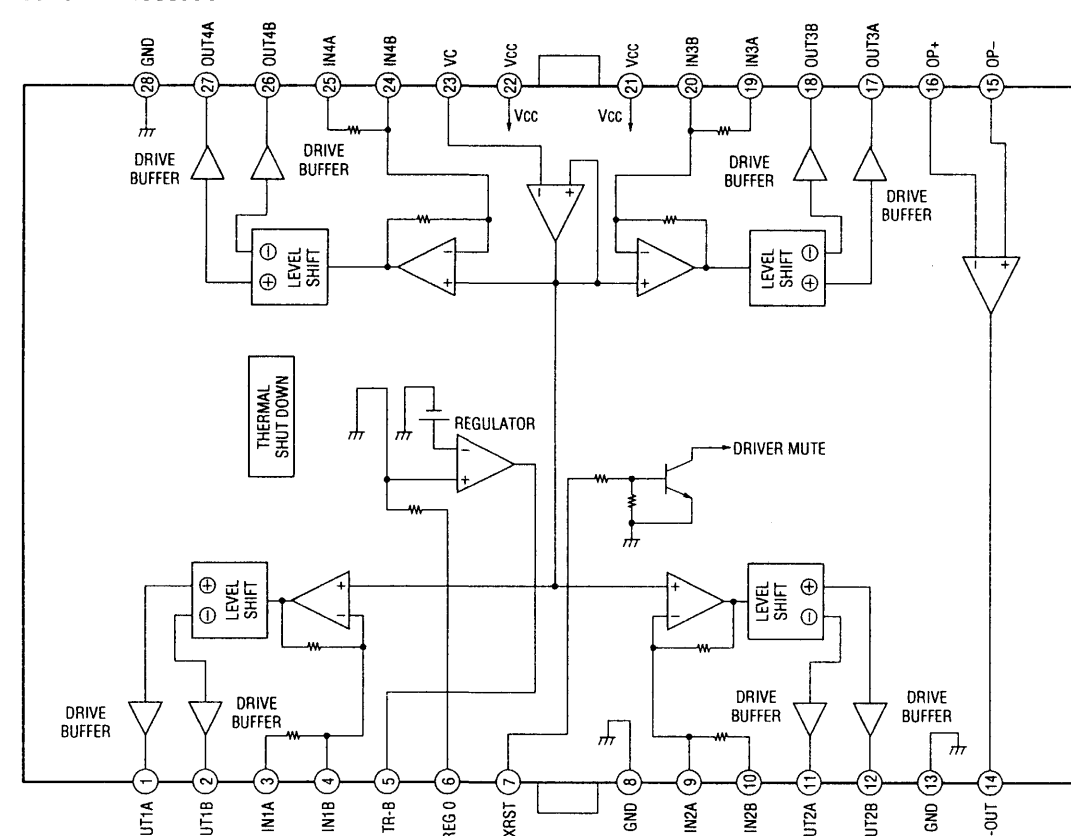
IC2 LA1835



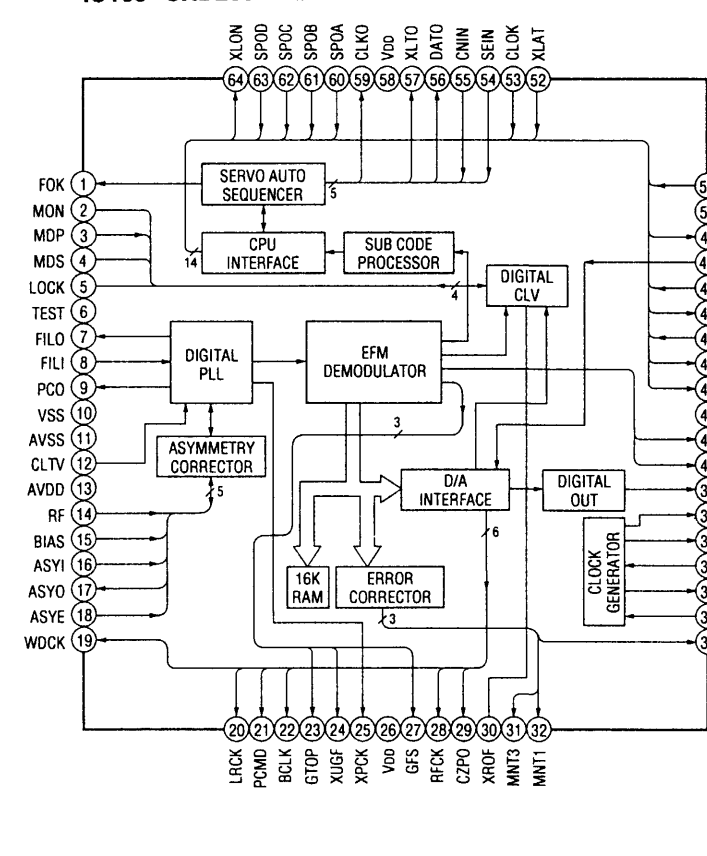
IC101 CXA1782BQ



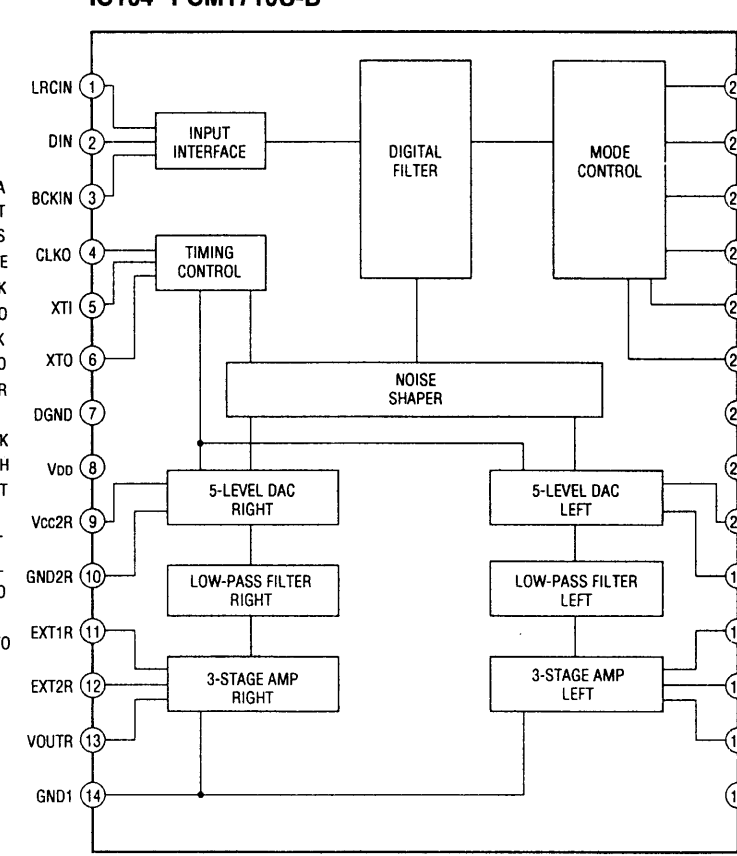
IC102 BA6397FP



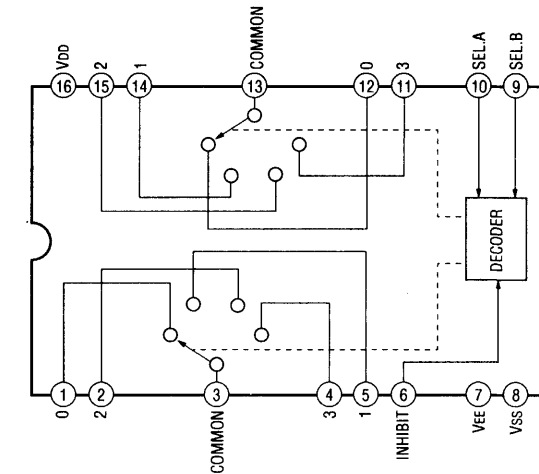
IC103 CXD2507AQ



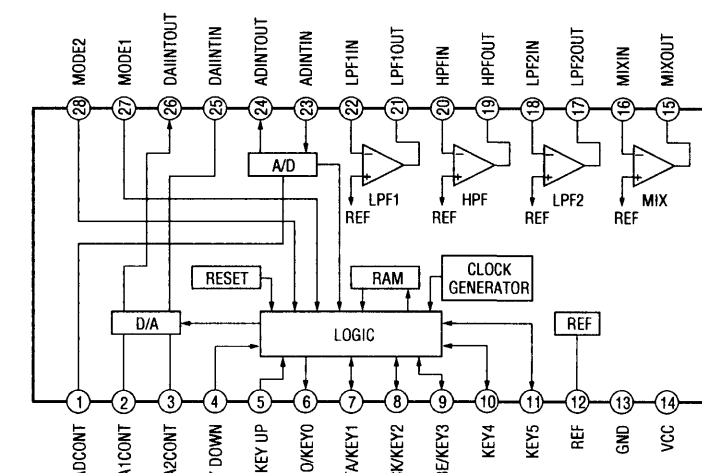
IC104 PCM1710U-B



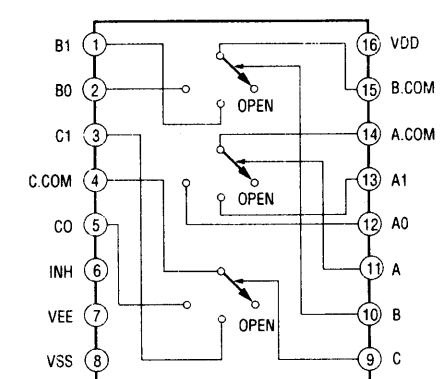
IC802 MC14052BCP



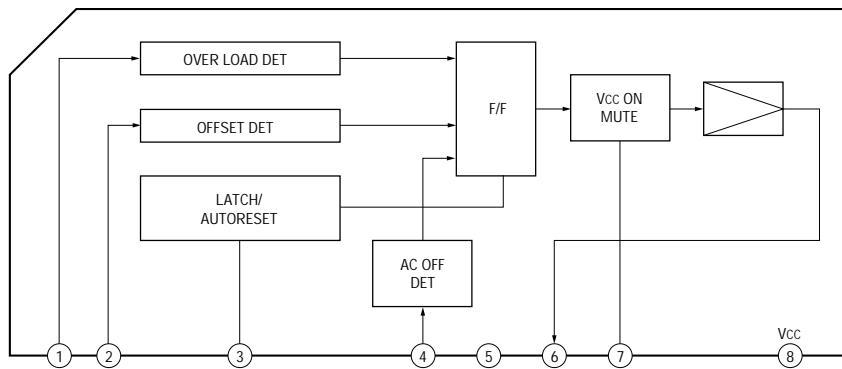
IC1401 M65847FP-TP



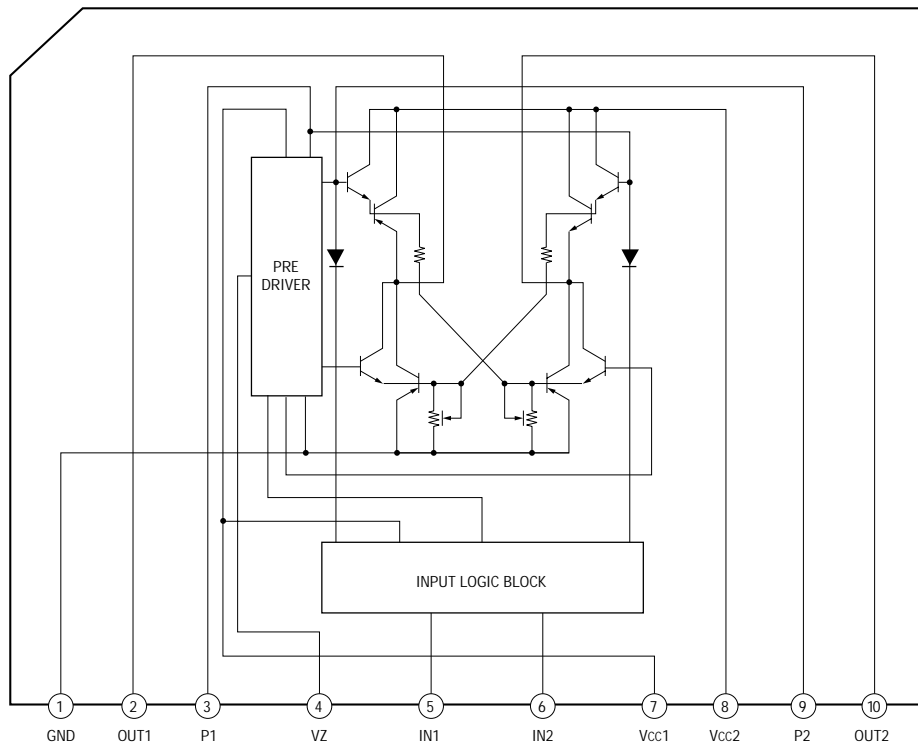
IC1403 MC14053BCP



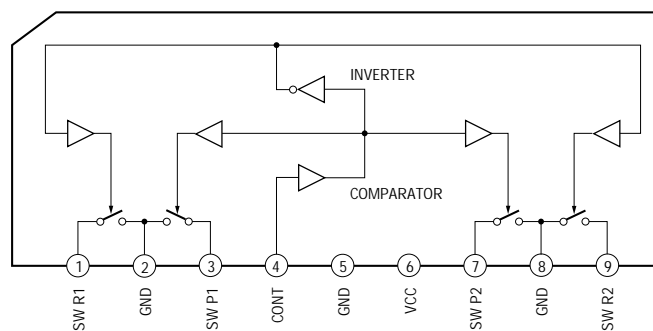
IC1202 μ PC1237HA



IC402 LB1641



IC602 μ PC1330HA



6-22. IC PIN FUNCTIONS

• IC501 DISPLAY CONTROL (ASD0204GF-012-3BA)/PANEL board

Pin No.	Pin Name	I/O	Function
1	VDD	—	+5V
2	LED8/ SUPER TWEETER ON	O	LED drive signal output./Super tweeter ON/OFF control output.
3, 4	LED7, 6	O	Not used.
5–9	LED5–1	O	LED drive signal output.
10	RESET	I	Reset signal input.
11	X2	O	X'tal (4 MHz).
12	X1	I	
13	IC (Vpp)	—	Ground
14	XT2	I	Not used.
15	JOG B	I	AMS encoder signal input.
16	VDD	—	+5V
17, 18	LED10, 9	O	LED drive signal output.
19	KEY SEL	O	Key select control.
20	VOL B	I	Volume encoder signal input.
21	REQ. GM	O	Request signal from/to master control.
22	CLK MG	I	Serial clock input.
23	DATA GM	O	Serial data output.
24	DATA MG	I	Serial data input.
25	AVss	—	Ground
26–29	SPEANA 4–1	I	Spectram analyzer signal input.
30–33	KEY 4–1	I	Key matrix input.
34	AVDD	—	+5V
35	AVREF	—	
36	VOL A	I	Volume encoder signal input.
37	JOG A	I	AMS encoder signal input.
38	RDY MG	I	Ready signal from master control.
39	SIRCS	I	SIRCS signal input.
40	Vss	—	Ground
41	DOR SW	I	CD door open detection input.
42	LED SELECT	O	LED select signal output.
43–45	LED13–11	O	LED drive signal output.
46	VDD	—	+5V
47, 48	LED5, 6	O	Not used.
49, 50	LED5, 4	O	LED drive signal output.
51–53	LED3–1	O	LED drive signal output.
54–78	SEG32–8	O	FL segment signal output.
79	V. LOAD	—	–25V for FL
80–86	SEG7–1	O	FL segment signal output.
87–100	GR14–1	O	FL grid signal output.

• Abbreviation

FL : Fluorescent Indicator Tube

• IC701 MASTER CONTROL (TMP87CS64YF-6521)

Pin No.	Pin Name	I/O	Function
1	Vss	—	Ground
2	XOUT	O	X'tal (10 MHz).
3	XIN	I	
4	RESET	I	Reset signal input.
5	XOUT	O	X'tal for clock (32.768 kHz)
6	XIN	I	
7	GND (test)	—	Ground
8	AC CUT	I	Back up signal input.
9	SUPER WOOFER ON	O	Not used. (Connected to ground)
10	ST-MUTE ON	O	Mute signal output for tuner.
11	180-A-PLAY	I	Tape detection signal input. (Not used) (Connected to ground)
12	180-B-PLAY	I	
13	180-B-REC	I	
14	CLK CHK	I	Not used.
15	UP-SW	I	Disc table up detect. (Not used) (Open)
16	IN-SW	I	Not used.
17	ENCODER-0	I	
18	ENCODER-1	I	
19	ENCODER-2	I	
20	OUT SW OPEN	I	
21	LOAD IN	O	Loading motor control signal output.
22	LOAD OUT	O	
23	TBL-L	O	Table motor control signal output.
24	TBL-R	O	
25	SCOR	I	Sub-code sync signal input.
26	TBL-SENS	I	CD Table sensor signal input.
27	RDS INT	I	RDS data start input. (Connected to ground)
28	RDS DATA	I	RDS data output. (Connected to ground)
29	DF LAT	O	Latch signal for digital filter.
30	SENS	I	Table sence signal input.
31	XRST	O	Reset signal output for CD.
32	MG-RDY	I	RDY signal from graphic control.
33	ADJ	I	Test mode input.
34	GM-REQ	I	Request signal from graphic control.
35	MG-CLK	O	Clock signal to graphic control.
36	GM-DATA	I	Data input from graphic control.
37	MG-DATA	O	Data output to graphic control.
38	CD-CLK	O	Clock output. Serial bus line.
39	ADJ-2	I	Test mode input.
40	CD-DATA	O	Data output. Serial bus line.



Pin No.	Pin Name	I/O	Function
41	AUB IN	I	Audio bus in/output. (Open)
42	AUB OUT	O	
43	FOCUS SW	O	Focus switching signal output.
44	SQ-CLK	O	Subcode Q data read clock output.
45	SQ-DATA	I	Subcode Q data input.
46	X-LAT	O	Latch signal digital signal processor.
47	TEST	I	Test land.
48	VAREF	I	Analog reference voltage input.
49	VAss	—	Ground
50	Vss	—	
51	VDD	—	+5V
52	SPEC	I	Destination detection setting input.
53	DESTINATION	I	
54	DISC SENS	I	Disc present/absent sensor input
55	TC RELAY	O	REC/PB select signal output.
56	A-SHUT	I	Control signal input from deck.
57	B-SHUT	I	
58	B-HALF	I	
59	A-HALF	I	
60	220-A-PLAY	I	
61	220-B-PLAY	I	
62	62427 LAT	O	PLL latch output.
63	K-CON-LAT	O	Latch signal for KEY CON.
64	VOL LAT (AV)	O	Latch signal for electrical volume. (Not used) (Open)
65	REAR SP RELAY B	O	Not used. (Open)
66	FRONT SP RELAY C	O	
67	POWER ON	O	Power on signal output.
68	CD POWER	O	CD power control signal output.
69	PROLOG LAT	O	Not used. (Open)
70	MUTE	O	Mute signal for AMP.
71	COM CLK	O	PLL clock output.
72	COM DIN	I	PLL data input.
73	COM DATA	O	PLL data output.
74	K CON ON	O	Control signal output for KEY CON.
75	LIDDED LED	O	Disc No. LED drive signal output. (Not used) (Open)
76	PROLOG ON	O	PRO LOGIC control output.
77	DBFB-HIGH	O	DBFB switching signal output.
78	URG STB STDBY	I	Not used. (Open)
79	URG STB ON	O	
80	TC A	O	Deck A, B select output.

Pin No.	Pin Name	I/O	Function
81	$\overline{\text{NORM}}$	O	NORMAL/HIGH control signal output.
82	$\overline{\text{BIAS OFF}}$	O	Bias oscillation output.
83	$\overline{\text{REC MUTE}}$	O	Mute output.
84	$\overline{\text{NR OFF}}$	O	Dolby ON/OFF signal output.
85	$\overline{\text{PB}}$	O	REC/PB control signal output.
86	$\overline{\text{PASS. AMP/DOLBY}}$	O	Dolby switching signal output.
87	$\overline{\text{LINE MUTE ON}}$	O	Mute signal output for deck.
88	$\overline{\text{CAP. M-HIGH}}$	O	Capstan motor control signal output.
89	A-TRG	O	Trigger motor control signal output.
90	B-TRG	O	
91	$\overline{\text{TRG LOW}}$	O	Trigger motor high/low control signal output.
92	$\overline{\text{CAP M ON}}$	O	Capstan motor ON/OFF control signal output.
93	$\overline{\text{STEREO}}$	I	Stereo detection signal from tuner.
94	$\overline{\text{TUNED}}$	I	Tuned detection signal from tuner.
95	ST-CE	O	Latch signal output for tuner.
96	$\overline{\text{DELAY SEL MIC}}$	O	Not used. (Connected to ground)
97	$\overline{\text{DELAY ON}}$	O	
98	DELAY LEVEL A	O	
99	DELAY LEVEL B	O	
100	VDD	—	+5V

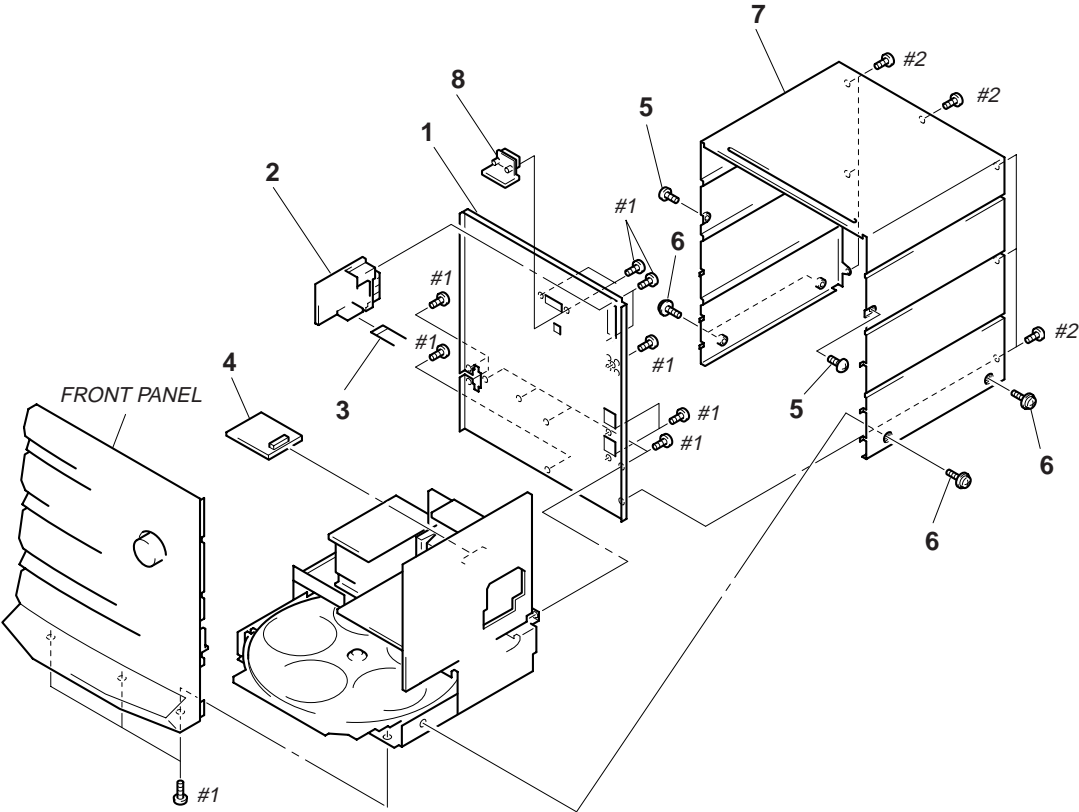
SECTION 7 EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

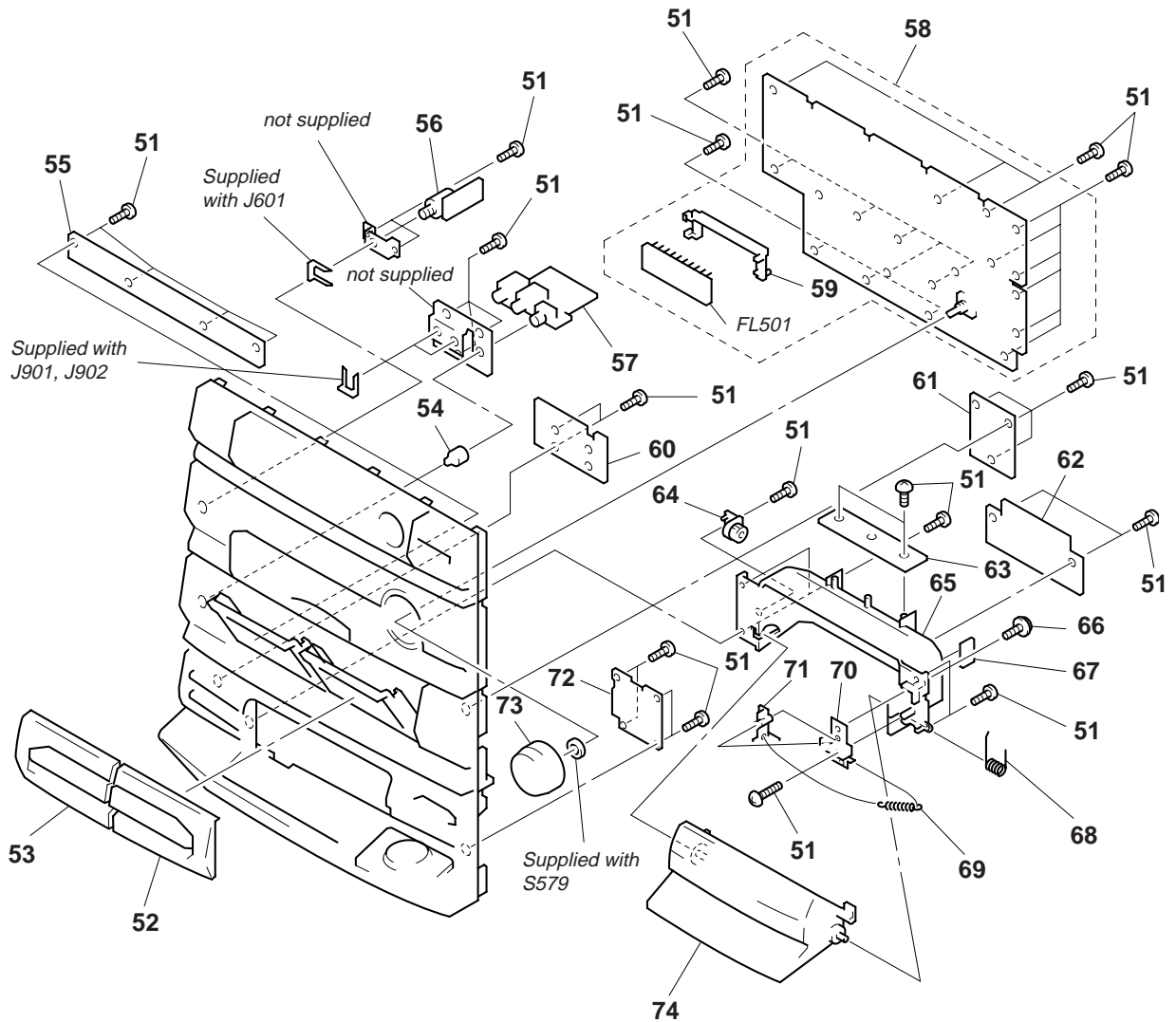
The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

7-1. CABINET AND BACK PANEL SECTION



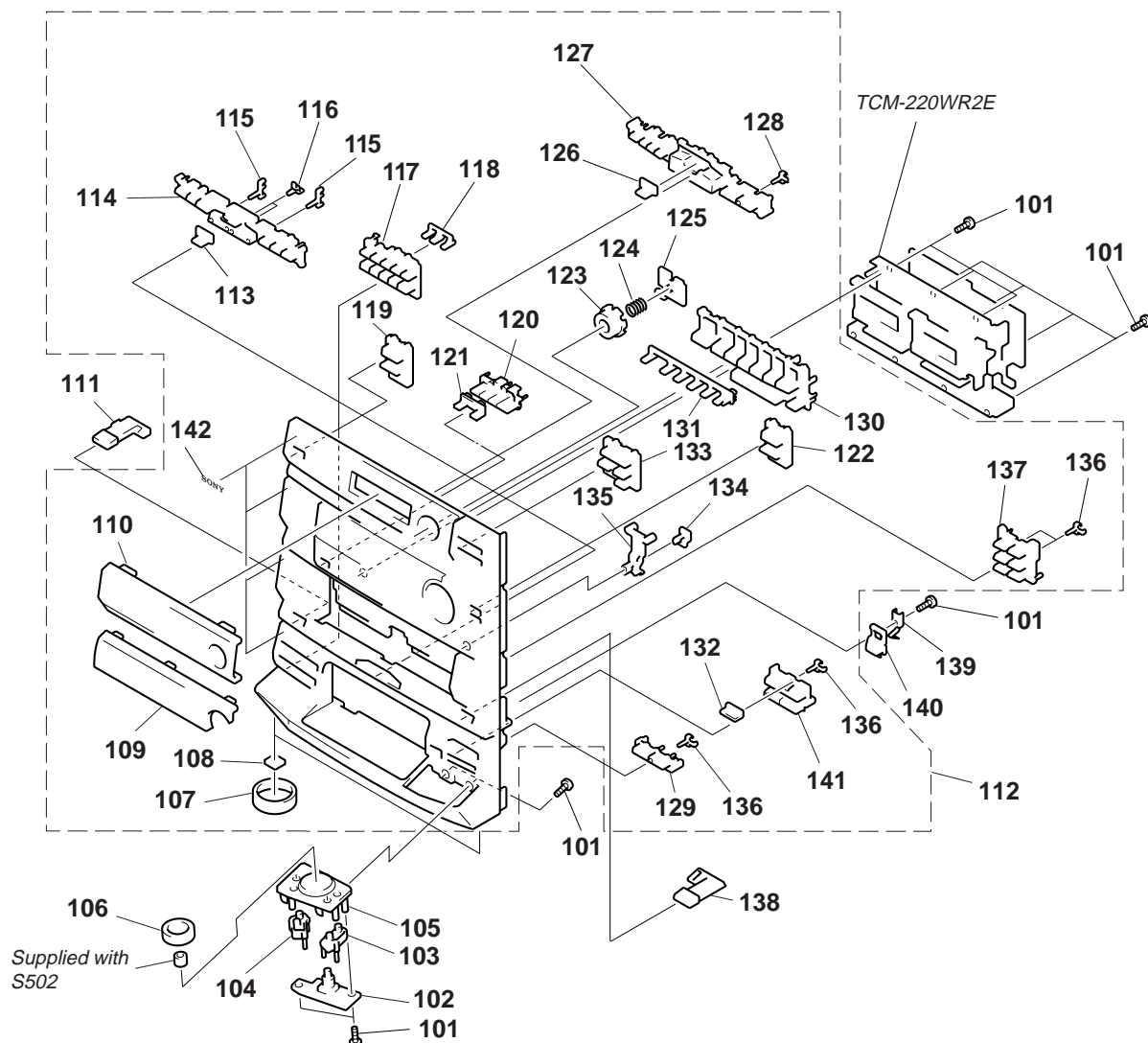
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 1	4-985-439-01	PANEL, BACK		6	4-929-973-01	SCREW (CASE, 3 POINT)	
* 2	A-4303-555-A	TCB BOARD, COMPLETE		* 7	4-978-177-11	CASE	
3	1-751-086-11	WIRE (FLAT TYPE) (13 CORE)		* 8	1-664-519-11	SP TERMINAL BOARD	
* 4	A-4390-214-A	KEY CON BOARD, COMPLETE					
5	3-363-099-01	SCREW (CASE 3 TP2)					

7-2. PANEL BOARD SECTION



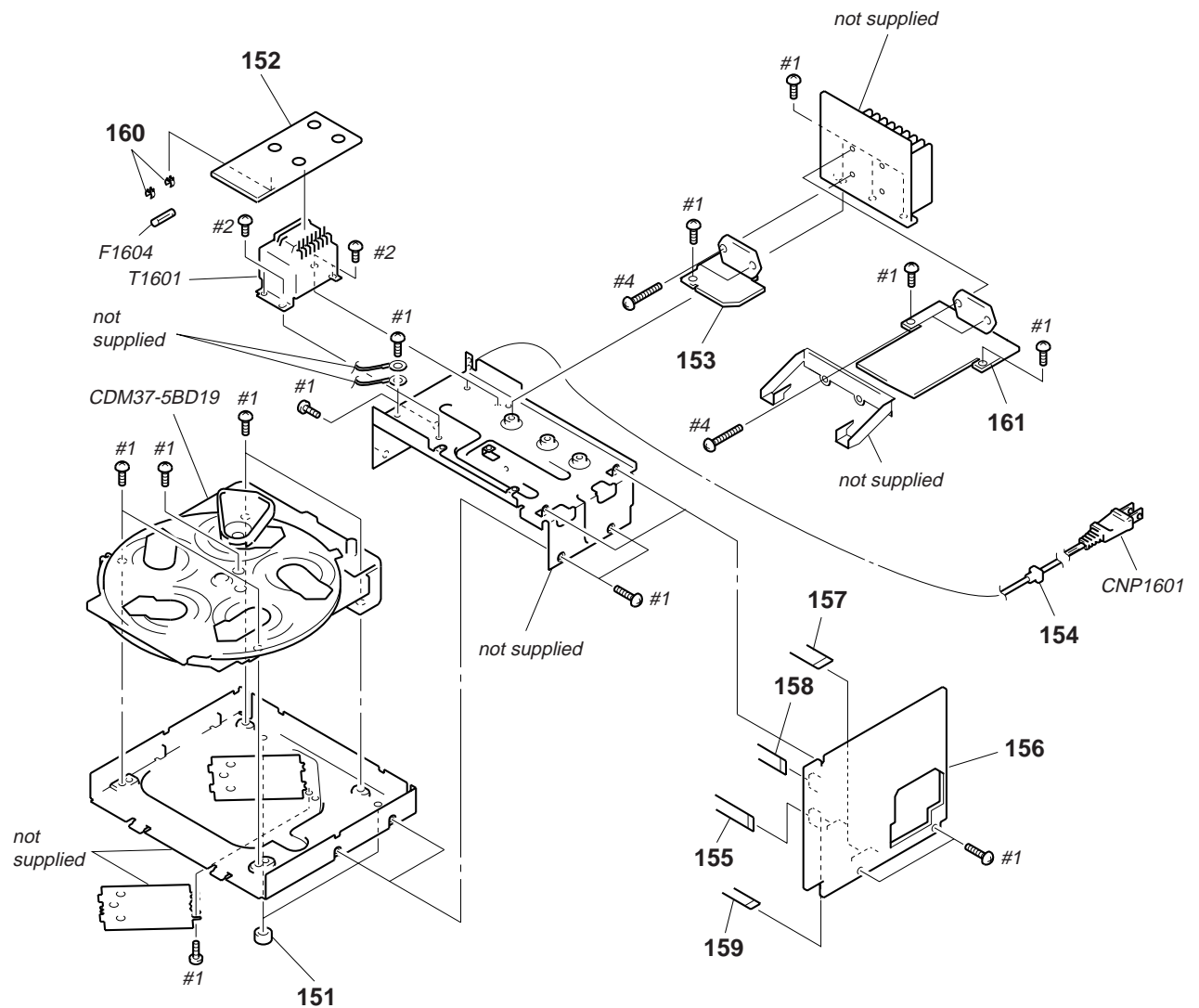
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	4-951-620-01	SCREW (2.6X8), +BVTP		64	3-354-963-21	DAMPER	
52	X-4946-636-1	LID (B) ASSY, CASSETTE		65	4-978-140-11	COVER (CD)	
53	X-4946-635-1	LID (A) ASSY, CASSETTE		66	4-957-577-01	SCREW PTP WH (2.6X8)(DIA. 10)	
54	4-973-644-01	KNOB (MIC)		* 67	1-659-408-11	DOOR-SW BOARD	
* 55	1-659-413-11	TC-CONTROL BOARD		68	4-978-171-01	SPRING, TORSION	
* 56	1-659-411-11	HP BOARD		69	4-978-170-01	SPRING, TENSION	
* 57	1-659-414-11	MIC BOARD		* 70	4-978-169-01	BRACKET (OPEN)	
* 58	A-4392-044-A	PANEL BOARD, COMPLETE		71	4-978-141-01	LEVER, LOCK	
59	4-971-014-11	HOLDER, FL TUBE		* 72	1-659-409-11	CD-R BOARD	
* 60	1-659-404-11	CD-L BOARD		73	4-978-142-01	KNOB (V)	
* 61	1-659-412-11	TC-SW BOARD		74	4-978-139-01	LID, DISC	
62	4-980-060-01	INDICATOR (COVER)		FL501	1-517-490-21	INDICATOR TUBE, FLUORESCENT	
* 63	1-659-406-11	CD-LED BOARD					

7-3. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	4-951-620-01	SCREW (2.6X8), +BVTP		122	4-978-122-01	BUTTON (DBFB)	
* 102	1-659-405-11	CD-JOG BOARD		123	4-978-119-01	BUTTON (CURSOR)	
103	4-978-153-01	BUTTON (PROGRAM)		124	4-978-683-01	SPRING, COMPRESSION	
104	4-978-712-01	BUTTON (SHUFFLE)		125	4-978-682-01	COVER (CURSOR)	
105	4-978-155-01	PLATE, ORNAMENTAL		126	4-978-135-01	INDICATOR (BAND)	
106	4-978-154-01	KNOB (DISC)		127	4-978-121-11	BUTTON (BAND)	
107	4-921-918-11	PLATE, ORNAMENTAL		128	4-978-136-01	INDICATOR (ENTER)	
108	4-948-236-01	CUSHION (107)		129	4-978-152-01	BUTTON (AUTO)	
109	4-978-134-21	DISPLAY (TA)		130	4-978-123-01	BUTTON (FU)	
110	4-978-131-01	DISPLAY (ST)		131	4-978-681-01	INDICATOR (SE5)	
111	4-978-146-01	BUTTON (EJECT-L)		132	4-978-137-01	INDICATOR (PLAY)	
112	A-4384-295-A	PANEL ASSY, FRONT		133	4-978-120-01	BUTTON (TUNING)	
113	4-978-157-01	INDICATOR (TC)		134	4-979-017-01	INDICATOR (SW)	
114	4-978-145-01	BUTTON (TC)		135	4-978-166-01	BUTTON (SUPER-TWEETER)	
115	4-978-159-01	INDICATOR (REV)		136	4-978-161-01	INDICATOR (PAUSE)	
116	4-978-158-01	INDICATOR (FWD)		137	4-978-144-11	BUTTON (DUBBING)	
117	4-978-127-11	BUTTON (DISC 5)		138	4-978-147-01	BUTTON (EJECT-R)	
118	4-978-160-01	INDICATOR (CLIP)		139	4-980-061-01	SPRING (OPEN)	
119	4-978-118-01	BUTTON (POWER)		140	4-978-130-01	BUTTON (OPEN)	
120	4-978-150-01	BUTTON (KARAOKE)		141	4-978-128-01	BUTTON (PLAY)	
121	4-978-156-01	INDICATOR (KARAOKE)		142	4-963-404-21	EMBLEM (5-A), SONY	

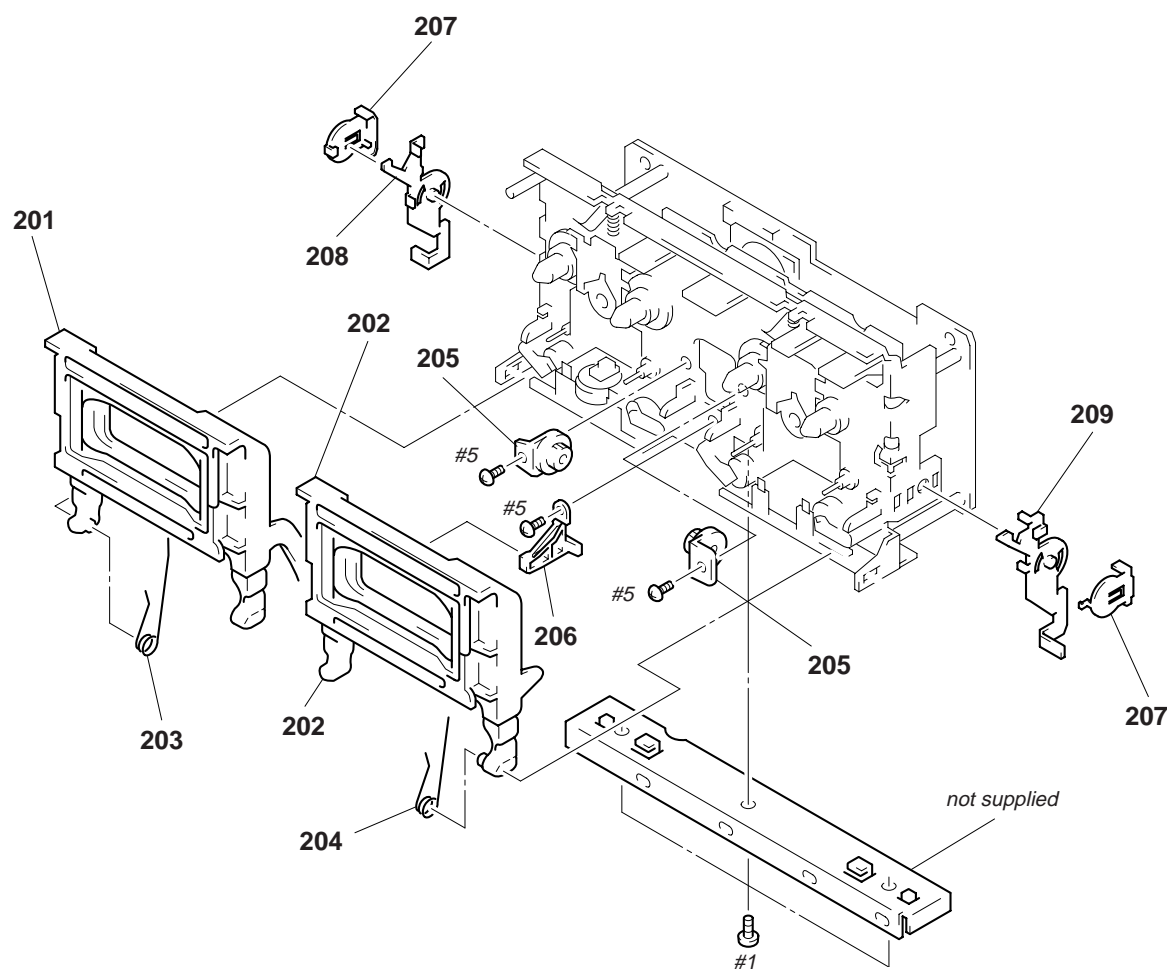
7-4. CHASSIS SECTION



The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	X-4941-228-1	FOOT ASSY		158	1-765-338-11	WIRE (FLAT TYPE) (21 CORE)	
* 152	1-659-218-11	TRANS BOARD		159	1-590-218-11	WIRE (FLAT TYPE) (11 CORE)	
* 153	A-4392-046-A	POWER AMPLIFIER BOARD, COMPLETE		160	1-533-233-21	HOLDER, FUSE	
154	3-703-571-11	BUSHING (S) (4516), CORD					
155	1-773-220-11	WIRE (FLAT TYPE) (25 CORE)		* 161	A-4392-311-A	ST SW BOARD, COMPLETE	
				\triangle CNP1601	1-751-326-21	CORD, POWER	
* 156	A-4392-499-A	MAIN BOARD, COMPLETE		\triangle F1604	1-532-503-31	FUSE, TIME LAG (1.6A 250V)	
157	1-776-238-11	WIRE (FLAT TYPE) (19 CORE)		\triangle T1601	1-431-130-11	TRANSFORMER, POWER	

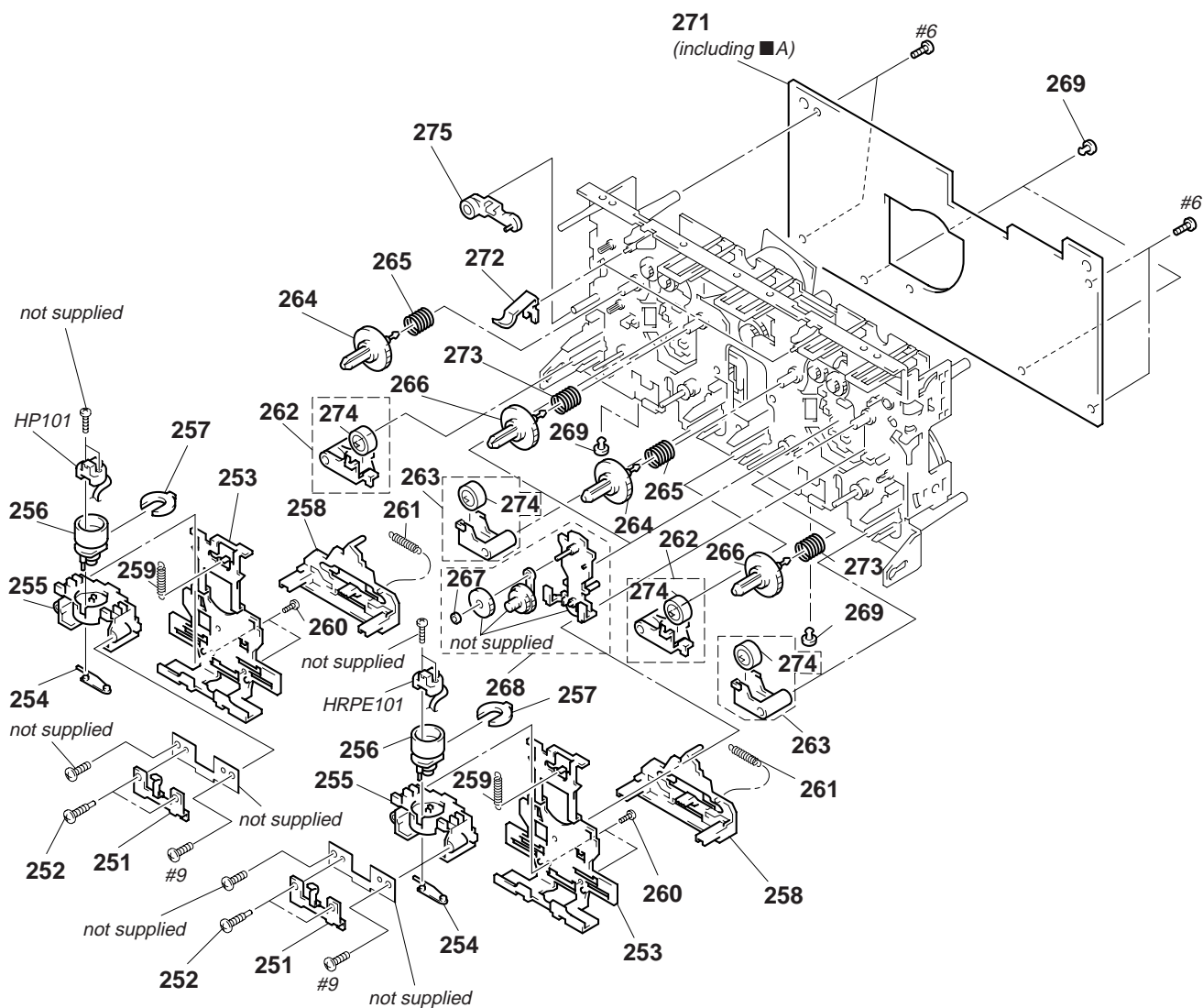
7-5. TC MECHANISM SECTION 1
(TCM-220WR2E)



Ref. No.	Part No.	Description	Remark
201	X-4945-690-1	HOLDER (L) ASSY, CASSETTE	
202	X-4945-691-1	HOLDER (R) ASSY, CASSETTE	
203	4-959-231-11	SPRING (L), TORSION	
204	4-959-232-11	SPRING (R), TORSION	
205	3-354-963-01	DAMPER	

Ref. No.	Part No.	Description	Remark
* 206	4-980-439-01	FULCRUM, HOLDER	
207	3-354-957-01	JOINT (LOCK LEVER)	
* 208	3-354-953-01	LEVER (LOCK LEVER L)	
* 209	3-354-954-01	LEVER (LOCK LEVER R)	

7-6. TC MECHANISM SECTION 2 (TCM-220WR2E)

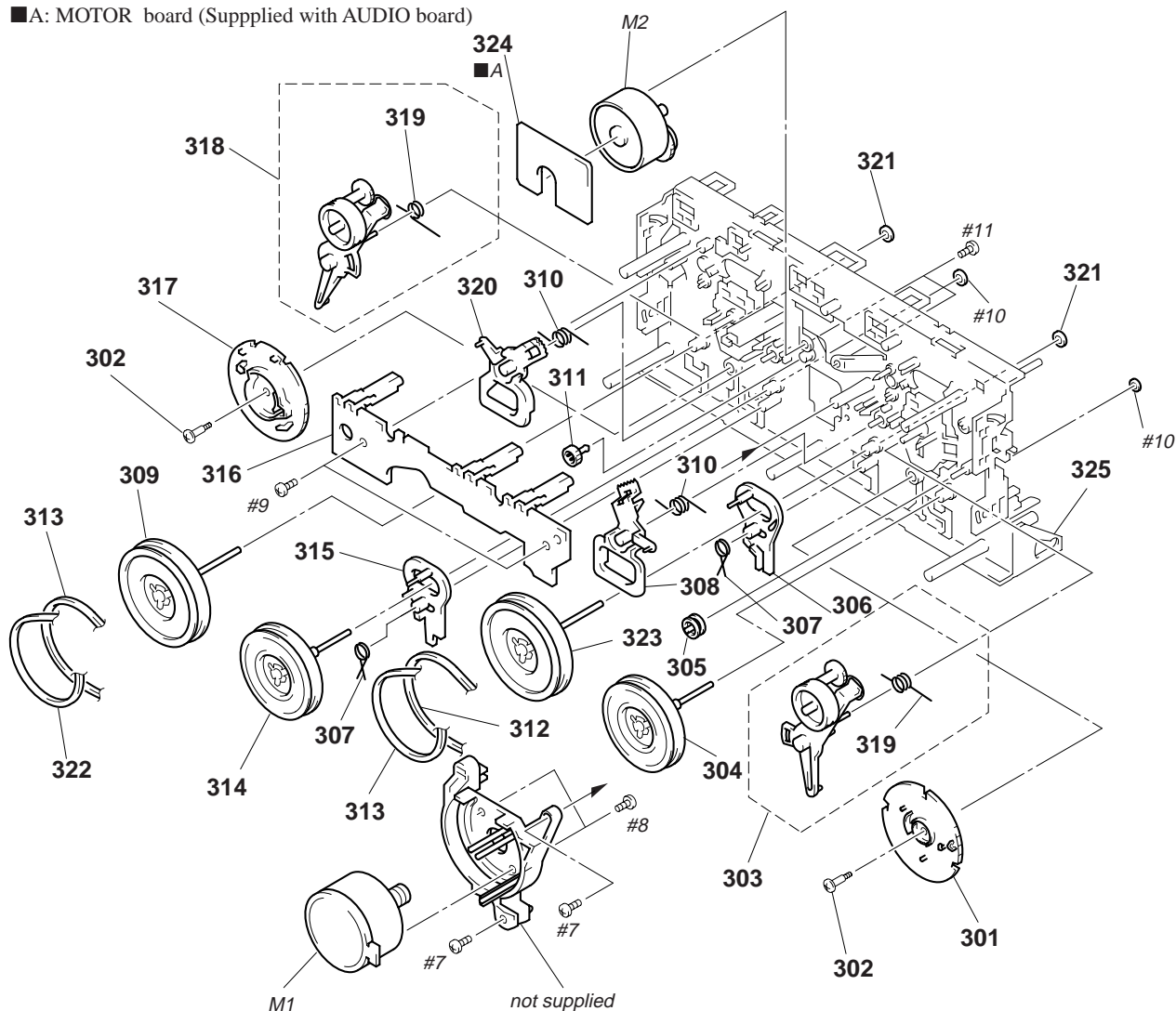


Ref. No.	Part No.	Description	Remark
251	3-908-560-01	SPRING, AZIMUTH ADJUSTMENT	
252	3-919-684-01	SCREW, AZIMUTH ADJUSTMENT	
* 253	X-3373-113-1	SLIDER (HEAD) ASSY	
254	3-908-556-01	SPRING, HEAD TOGGLE	
255	3-908-558-02	FITTING BLOCK, HEAD	
256	3-908-557-02	ROTARY BLOCK, HEAD	
* 257	3-908-559-01	STOPPER, AZIMUTH	
258	3-908-555-01	SLIDER (REV SLIDER)	
259	3-917-143-11	SPRING, TENSION	
260	3-388-848-01	SCREW (P2X6)(B TIGHT)	
261	3-939-371-01	SPRING (1), TENSION	
262	X-3369-909-1	PINCH LEVER (REV) ASSY	
263	X-3369-908-1	PINCH LEVER (FWD) ASSY	

Ref. No.	Part No.	Description	Remark
264	3-908-613-01	GEAR (S), REEL	
265	3-917-141-01	SPRING, COMPRESSION	
266	X-3371-305-1	REEL (T) ASSY	
267	3-669-465-01	WASHER (1.5), STOPPER	
268	X-3370-173-1	TU ASSY	
269	3-939-862-01	CLIP	
* 271	A-2007-435-A	AUDIO BOARD, COMPLETE	
272	3-930-972-01	DETENT, HALF	
273	3-917-142-01	SPRING, COMPRESSION	
274	3-355-808-02	PINCH ROLLER	
275	3-938-863-01	STOPPER	
HP101	1-500-093-11	HEAD, MAGNETIC (PLAYBACK)	
HRPE101	1-500-094-11	HEAD, MAGNETIC (REC/PB/ERASE)	

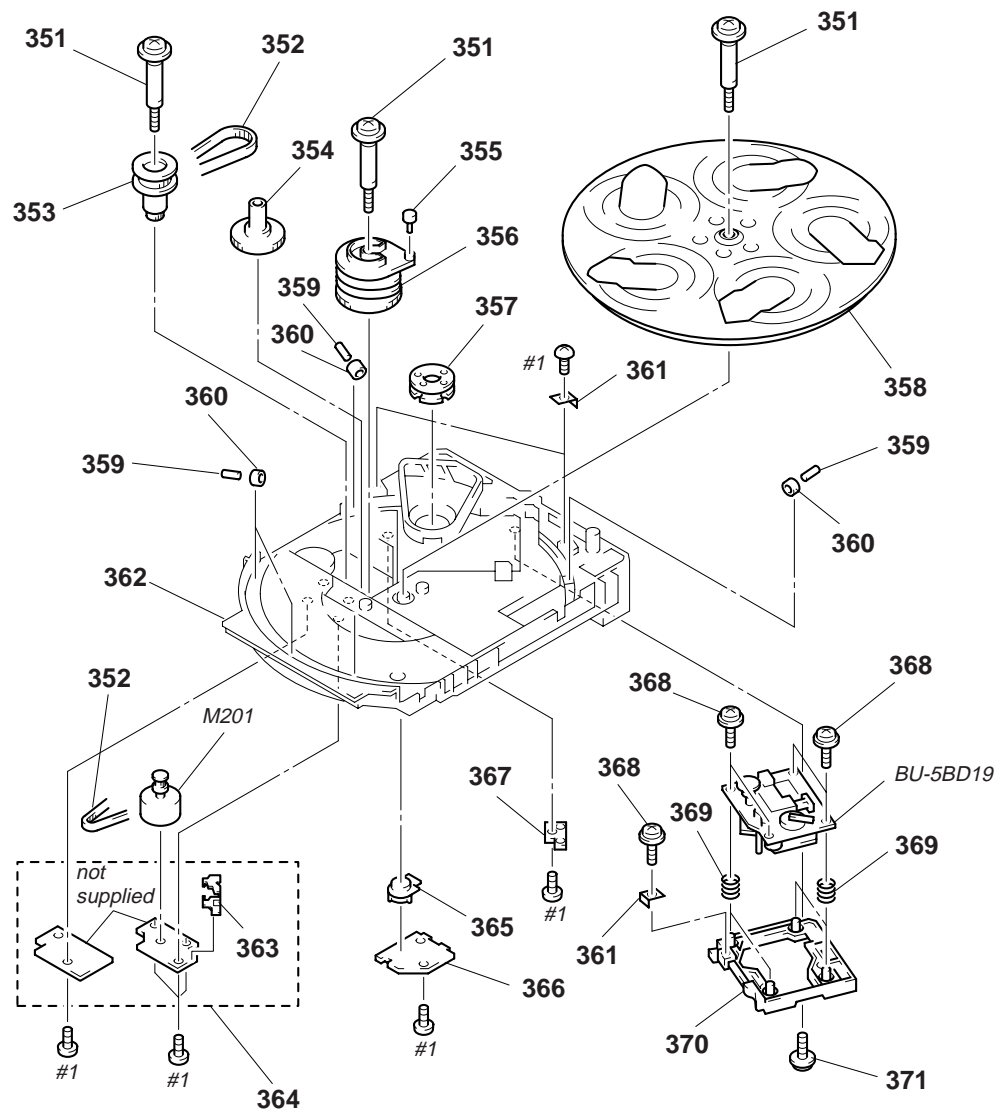
7-7. TC MECHANISM SECTION 3 (TCM-220WR2E)

■A: MOTOR board (Supplied with AUDIO board)



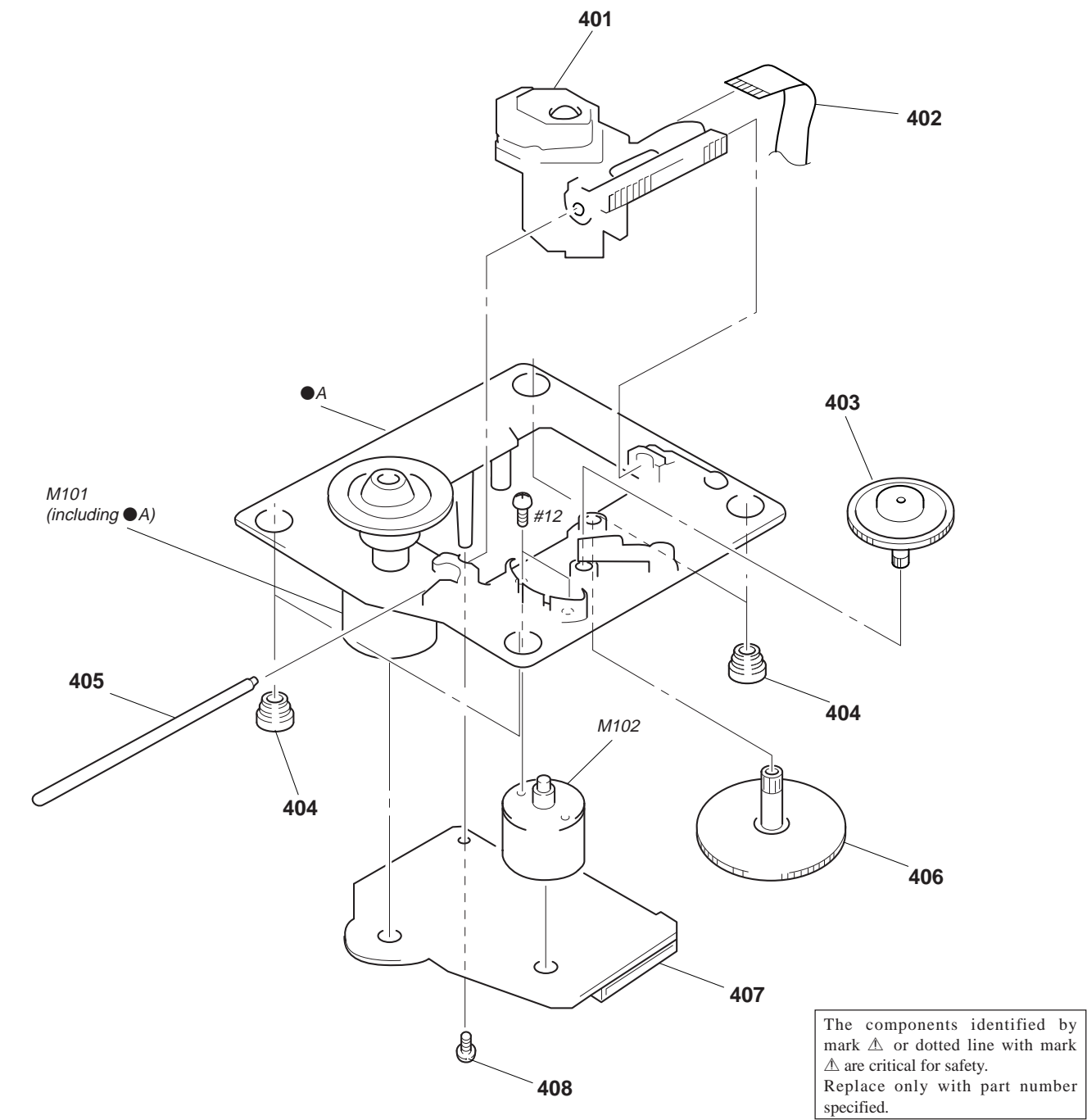
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
301	3-908-597-01	CAM (A)		315	3-908-600-01	LEVER (REV-B)	
302	3-908-608-11	SCREW, STEP		* 316	1-650-669-11	LEAF SWITCH BOARD	
303	X-3372-930-1	ARM (A) ASSY, FR		317	3-908-598-01	CAM (B)	
304	X-3370-169-1	FLYWHEEL (AR) ASSY		318	X-3372-931-1	ARM (B) ASSY, FR	
305	3-928-047-01	PULLEY, TENSION		319	3-911-114-01	SPRING (FR), TORSION	
306	3-908-599-01	LEVER (REV-A)		320	3-908-604-01	LEVER (TRIGGER B)	
307	3-908-601-01	SPRING (REV LEVER), TORSION		321	3-911-115-01	WASHER, STOPPER	
308	3-908-603-01	LEVER (TRIGGER A)		322	3-917-176-11	BELT (B)	
309	X-3370-170-1	FLYWHEEL (BF) ASSY		323	X-3370-172-1	FLYWHEEL (AF) ASSY	
310	3-908-605-01	SPRING (TRIGGER), TORSION		* 324	A-2007-435-A	AUDIO BOARD, COMPLETE	
311	3-908-609-01	GEAR, TRIGGER		325	X-3371-441-1	CHASSIS ASSY, MECHANICAL	
312	3-913-845-11	BELT (A)					
313	3-913-846-11	BELT (FR)		M1	X-3371-223-1	MOTOR ASSY (CAPSTAN)	
314	X-3370-171-1	FLYWHEEL (BR) ASSY		M2	A-2004-410-A	MOTOR ASSY (TRIGGER)	

7-8. CD MECHANISM SECTION (CDM37-5BD19)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
351	4-987-976-02	SCREW, STEP		* 362	4-978-418-01	CHASSIS	
352	4-944-490-01	BELT (TIMING)		* 363	4-980-385-01	HOLDER (SW)	
353	A-4660-978-A	GEAR (PULLEY) ASSY		* 364	A-4673-765-A	CD MOTOR BOARD, COMPLETE	
354	4-978-421-01	GEAR (MID)		365	4-978-426-01	INDICATOR (NO.)	
355	4-978-425-01	ROLLER (CAM)					
356	4-978-420-01	CAM (HOLDER)		* 366	1-659-059-13	LED BOARD	
* 357	1-452-538-11	MAGNET		* 367	1-659-058-13	TABLE SENSOR BOARD	
358	4-978-417-01	TABLE, DISC		368	4-933-134-01	SCREW (+PTPWH M2.6X6)	
359	4-934-376-01	SHAFT (ROLLER)		369	4-958-593-01	SPRING (BU), COMPRESSION	
360	X-4924-457-1	ROLLER ASSY		* 370	4-978-419-01	HOLDER (BU-5)	
* 361	4-978-583-01	BRACKET (BU)		371	4-917-583-71	BRACKET, YOKE	
				M201	A-4660-977-A	MOTOR ASSY (TABLE)	

7-9. BASE UNIT SECTION (BU-5BD19)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
\triangle 401	8-848-387-01	OPTICAL PICK-UP KSS-213BA/S-N		406	4-917-564-01	GEAR (P), FLATNESS	
402	1-769-069-11	WIRE (FLAT TYPE)(16 CORE)		* 407	A-4673-402-A	BD BOARD, COMPLETE	
403	4-917-567-01	GEAR (M)		408	4-951-620-01	SCREW (2.6X8), +BVTP	
404	4-951-940-01	INSULATOR (BU)		M101	X-4917-523-4	MOTOR ASSY (SPINDLE)	
405	4-917-565-01	SHAFT, SLED		M102	X-4917-504-1	MOTOR ASSY (SLED)	

SECTION 8 ELECTRICAL PARTS LIST

AUDIO

Note:

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
All resistors are in ohms
METAL: Metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F : nonflammable

- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA...: μ PA..., uPB...: μ PB...,
uPC...: μ PC..., uPD...: μ PD...
- CAPACITORS
uF : μ F
- COILS
uH : μ H

Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark			
*	A-2007-435-A	AUDIO BOARD, COMPLETE ***** (including MOTOR board)					*	CN651	1-564-521-11 PLUG, CONNECTOR 6P				
		< CAPACITOR >							< IC >				
C301	1-162-289-31	CERAMIC	390PF	10%	50V		IC601	8-759-111-44	IC uPC4570C-1				
C302	1-126-968-11	ELECT	100uF	20%	6.3V		IC602	8-759-143-54	IC uPC1330HA				
C303	1-162-282-31	CERAMIC	100PF	10%	50V		IC611	8-759-111-44	IC uPC4570C-1				
C304	1-130-483-00	MYLAR	0.01uF	5%	50V				< COIL >				
C305	1-107-715-11	ELECT	22uF	20%	16V		L331	1-410-780-11	INDUCTOR 27mH				
							L431	1-410-780-11	INDUCTOR 27mH				
C311	1-162-289-31	CERAMIC	390PF	10%	50V				< MOTOR >				
C313	1-162-282-31	CERAMIC	100PF	10%	50V								
C314	1-130-487-00	MYLAR	0.022uF	5%	50V		M1	A-2004-410-A	MOTOR ASSY (TRIGGER)				
C315	1-126-233-11	ELECT	22uF	20%	50V				< TRANSISTOR >				
C331	1-137-427-11	FILM	120PF	5%	50V								
C332	1-162-288-31	CERAMIC	330PF	10%	50V		Q621	8-729-142-46	TRANSISTOR 2SC2001-LK				
C333	1-162-209-31	CERAMIC	27PF	5%	50V		Q622	8-729-142-46	TRANSISTOR 2SC2001-LK				
C401	1-162-289-31	CERAMIC	390PF	10%	50V		Q623	8-729-030-18	TRANSISTOR 2SD2525				
C402	1-126-968-11	ELECT	100uF	20%	6.3V		Q651	8-729-900-65	TRANSISTOR DTA144ES				
C403	1-162-282-31	CERAMIC	100PF	10%	50V				< RESISTOR >				
C404	1-130-483-00	MYLAR	0.01uF	5%	50V		R301	1-247-881-00	CARBON 120K	5%	1/4W		
C405	1-107-715-11	ELECT	22uF	20%	16V		R302	1-249-409-11	CARBON 220	5%	1/4W	F	
C411	1-162-289-31	CERAMIC	390PF	10%	50V		R303	1-249-433-11	CARBON 22K	5%	1/4W		
C413	1-162-282-31	CERAMIC	100PF	10%	50V		R304	1-247-889-00	CARBON 270K	5%	1/4W		
C414	1-130-487-00	MYLAR	0.022uF	5%	50V		R305	1-247-858-11	CARBON 13K	5%	1/4W		
C415	1-126-233-11	ELECT	22uF	20%	50V		R311	1-247-881-00	CARBON 120K	5%	1/4W		
C431	1-137-427-11	FILM	120PF	5%	50V		R312	1-247-807-31	CARBON 100	5%	1/4W		
C432	1-162-288-31	CERAMIC	330PF	10%	50V		R314	1-247-882-11	CARBON 130K	5%	1/4W		
C433	1-162-209-31	CERAMIC	27PF	5%	50V		R315	1-247-850-11	CARBON 6.2K	5%	1/4W		
C601	1-104-396-11	ELECT	10uF	20%	16V		R331	1-249-430-11	CARBON 12K	5%	1/4W		
C602	1-104-396-11	ELECT	10uF	20%	16V		R401	1-247-881-00	CARBON 120K	5%	1/4W		
C611	1-124-907-11	ELECT	10uF	20%	50V		R402	1-249-409-11	CARBON 220	5%	1/4W	F	
C612	1-124-907-11	ELECT	10uF	20%	50V		R403	1-249-433-11	CARBON 22K	5%	1/4W		
C621	1-137-150-11	FILM	0.01uF	5%	100V		R404	1-247-889-00	CARBON 270K	5%	1/4W		
C622	1-126-961-11	ELECT	2.2uF	20%	50V		R405	1-247-858-11	CARBON 13K	5%	1/4W		
C623	1-136-155-00	FILM	0.015uF	5%	50V		R411	1-247-881-00	CARBON 120K	5%	1/4W		
C624	1-130-481-00	MYLAR	0.0068uF	5%	50V		R412	1-247-807-31	CARBON 100	5%	1/4W		
C625	1-130-481-00	MYLAR	0.0068uF	5%	50V		R414	1-247-882-11	CARBON 130K	5%	1/4W		
C627	1-124-903-11	ELECT	1uF	20%	50V		R415	1-247-850-11	CARBON 6.2K	5%	1/4W		
C628	1-136-153-00	FILM	0.01uF	5%	50V		R431	1-249-430-11	CARBON 12K	5%	1/4W		
C642	1-104-664-11	ELECT	47uF	20%	16V		R601	1-249-409-11	CARBON 220	5%	1/4W	F	
C651	1-161-494-00	CERAMIC	0.022uF		25V		R602	1-249-409-11	CARBON 220	5%	1/4W	F	
		< CONNECTOR >					R608	1-249-409-11	CARBON 220	5%	1/4W	F	
* CN601	1-568-864-11	SOCKET, CONNECTOR 21P					R609	1-249-433-11	CARBON 22K	5%	1/4W		
* CN602	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P					R611	1-249-409-11	CARBON 220	5%	1/4W	F	

Ref. No.	Part No.	Description	Remark		
R612	1-249-409-11	CARBON	220	5%	1/4W F
△ R621	1-212-851-00	FUSIBLE	5.6	5%	1/4W F
△ R622	1-212-851-00	FUSIBLE	5.6	5%	1/4W F
R623	1-249-432-11	CARBON	18K	5%	1/4W
R624	1-249-432-11	CARBON	18K	5%	1/4W
< VARIABLE RESISTOR >					
RV301	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV311	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV341	1-238-551-11	RES, ADJ, CARBON 220K			
RV401	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV411	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV441	1-238-551-11	RES, ADJ, CARBON 220K			
RV651	1-238-599-11	RES, ADJ, CARBON 4.7K			
RV652	1-238-599-11	RES, ADJ, CARBON 4.7K			
< TRANSFORMER >					
T621	1-423-980-11	TRANSFORMER, BIAS OSCILLATION			

*	A-4673-402-A	BD BOARD, COMPLETE			

< CAPACITOR >					
C101	1-126-607-11	ELECT CHIP	47uF	20%	4V
C102	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C103	1-164-346-11	CERAMIC CHIP	1uF		16V
C105	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C106	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C107	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C108	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C109	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C111	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C112	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C113	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C114	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C115	1-126-607-11	ELECT CHIP	47uF	20%	4V
C116	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
C117	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C118	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C119	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C120	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C121	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C122	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C123	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C124	1-126-607-11	ELECT CHIP	47uF	20%	4V
C125	1-164-232-11	CERAMIC CHIP	0.01uF		50V

Ref. No.	Part No.	Description	Remark		
C126	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C127	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C128	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C129	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C130	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C131	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C132	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C133	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C134	1-164-346-11	CERAMIC CHIP	1uF		16V
C135	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C136	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C137	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C139	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C140	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C141	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C142	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C145	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C146	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C147	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C148	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C149	1-164-346-11	CERAMIC CHIP	1uF		16V
C153	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C154	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
< CONNECTOR >					
CNU101	1-770-014-11	CONNECTOR, FFC/FPC 16P			
CNU102	1-770-013-11	CONNECTOR, FFC/FPC 19P			
< IC >					
IC101	8-752-069-56	IC CXA1782BQ			
IC102	8-759-291-06	IC BA6397FP			
IC103	8-752-372-94	IC CXD2507AQ			
IC104	8-759-185-29	IC PCM1710U-B			
< MOTOR >					
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)			
M102	X-4917-504-1	MOTOR ASSY (SLED)			
< TRANSISTOR >					
Q101	8-729-010-08	TRANSISTOR MSB710-R			
Q102	8-729-424-08	TRANSISTOR UN2111			
Q103	8-729-421-22	TRANSISTOR UN2211			
< RESISTOR >					
R102	1-216-001-00	METAL CHIP	10	5%	1/10W
R103	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R104	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R105	1-216-093-00	METAL CHIP	68K	5%	1/10W
R106	1-216-093-00	METAL CHIP	68K	5%	1/10W
R107	1-216-093-00	METAL CHIP	68K	5%	1/10W
R108	1-216-093-00	METAL CHIP	68K	5%	1/10W

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

BD

CD-JOG

CD-L

Ref. No.	Part No.	Description			Remark
R109	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R112	1-216-083-00	METAL CHIP	27K	5%	1/10W
R113	1-216-083-00	METAL CHIP	27K	5%	1/10W
R114	1-216-101-00	METAL CHIP	150K	5%	1/10W
R115	1-216-101-00	METAL CHIP	150K	5%	1/10W
R116	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R117	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R118	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R119	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R120	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R121	1-216-114-00	METAL GLAZE	510K	5%	1/10W
R122	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R123	1-216-099-00	METAL CHIP	120K	5%	1/10W
R124	1-216-091-00	METAL CHIP	56K	5%	1/10W
R125	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R126	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R127	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R128	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R129	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R130	1-216-079-00	METAL CHIP	18K	5%	1/10W
R131	1-216-079-00	METAL CHIP	18K	5%	1/10W
R132	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R133	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R134	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R135	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R136	1-216-073-00	METAL CHIP	10K	5%	1/10W
R137	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R138	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R139	1-216-033-00	METAL CHIP	220	5%	1/10W
R140	1-216-081-00	METAL CHIP	22K	5%	1/10W
R141	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R142	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R143	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R144	1-216-073-00	METAL CHIP	10K	5%	1/10W
R145	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R146	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R147	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R148	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R149	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R150	1-216-037-00	METAL CHIP	330	5%	1/10W
R151	1-216-037-00	METAL CHIP	330	5%	1/10W
R152	1-216-037-00	METAL CHIP	330	5%	1/10W
R153	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R154	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R156	1-216-085-00	METAL CHIP	33K	5%	1/10W
R157	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R158	1-216-001-00	METAL CHIP	10	5%	1/10W
< VARIABLE RESISTOR >					
RV101	1-223-587-11	RES, ADJ, CARBON 22K			
RV102	1-223-587-11	RES, ADJ, CARBON 22K			
RV103	1-223-587-11	RES, ADJ, CARBON 22K			

Ref. No.	Part No.	Description			Remark
< SWITCH >					
S101	1-572-085-11	SWITCH, LEAF (LIMIT)			
< VIBRATOR >					
X101	1-579-280-11	VIBRATOR, CRYSTAL (16.9344MHz)			

*	1-659-405-11	CD-JOG BOARD			

< CAPACITOR >					
C515	1-162-306-11	CERAMIC	0.01uF	30%	16V
C516	1-162-306-11	CERAMIC	0.01uF	30%	16V
< CONNECTOR >					
* CN518	1-568-942-11	PIN, CONNECTOR 4P			
< RESISTOR >					
R558	1-249-421-11	CARBON	2.2K	5%	1/4W F
R559	1-247-843-11	CARBON	3.3K	5%	1/4W
R560	1-249-427-11	CARBON	6.8K	5%	1/4W F
R561	1-249-431-11	CARBON	15K	5%	1/4W
< SWITCH >					
S502	1-473-534-11	ENCODER, ROTARY (I<<< AMS >>>I)			
S559	1-554-303-21	SWITCH, TACTILE (PROGRAM)			
S560	1-554-303-21	SWITCH, TACTILE (REPEAT)			
S561	1-554-303-21	SWITCH, TACTILE (SHUFFLE)			
S562	1-554-303-21	SWITCH, TACTILE (CONTINUE)			

*	1-659-404-11	CD-L BOARD			

< CONNECTOR >					
* CN515	1-568-944-11	PIN, CONNECTOR 6P			
< DIODE >					
D638	8-719-057-09	DIODE LNJ801LPDJA (MUSIC CLIP CLIP C)			
D639	8-719-057-09	DIODE LNJ801LPDJA (MUSIC CLIP CLIP B)			
D640	8-719-057-09	DIODE LNJ801LPDJA (MUSIC CLIP CLIP A)			
< RESISTOR >					
R568	1-247-815-91	CARBON	220	5%	1/4W
R569	1-249-411-11	CARBON	330	5%	1/4W
R570	1-249-413-11	CARBON	470	5%	1/4W F
R571	1-249-415-11	CARBON	680	5%	1/4W F
R572	1-249-417-11	CARBON	1K	5%	1/4W F
R573	1-249-419-11	CARBON	1.5K	5%	1/4W F
R574	1-249-421-11	CARBON	2.2K	5%	1/4W F

CD-L	CD-LED	CD MOTOR	CD-R	DOOR-SW
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Ref. No.	Part No.	Description	Remark		
R575	1-247-843-11	CARBON	3.3K	5%	1/4W
R576	1-249-427-11	CARBON	6.8K	5%	1/4W
R577	1-249-431-11	CARBON	15K	5%	1/4W
< SWITCH >					
S569	1-554-303-21	SWITCH, TACTILE (MUSIC CLIP CLIP C)			
S570	1-554-303-21	SWITCH, TACTILE (MUSIC CLIP CLIP B)			
S571	1-554-303-21	SWITCH, TACTILE (MUSIC CLIP CLIP A)			
S572	1-554-303-21	SWITCH, TACTILE (MUSIC CLIP ERASE)			
S573	1-554-303-21	SWITCH, TACTILE (MUSIC CLIP PLAY)			
S574	1-554-303-21	SWITCH, TACTILE (DISC SELECT DISC 1)			
S575	1-554-303-21	SWITCH, TACTILE (DISC SELECT DISC 2)			
S576	1-554-303-21	SWITCH, TACTILE (DISC SELECT DISC 3)			
S577	1-554-303-21	SWITCH, TACTILE (DISC SELECT DISC 4)			
S578	1-554-303-21	SWITCH, TACTILE (DISC SELECT DISC 5)			

*	1-659-406-11	CD-LED BOARD	*****		
< CONNECTOR >					
CN516	1-506-481-11	PIN, CONNECTOR 2P			
< DIODE >					
D3151	8-719-057-40	DIODE	HLMF-K305-2VB (5CD)		
D3152	8-719-058-19	DIODE	HLMF-K405-2UL (5CD)		
D3153	8-719-058-19	DIODE	HLMF-K405-2UL (5CD)		
D3154	8-719-057-40	DIODE	HLMF-K305-2VB (5CD)		
< RESISTOR >					
R3151	1-249-412-11	CARBON	390	5%	1/4W

*	A-4673-765-A	CD MOTOR BOARD, COMPLETE	*****		
*	4-980-385-01	HOLDER (SW)			
< CAPACITOR >					
C201	1-124-907-11	ELECT	10uF	20%	50V
C202	1-164-159-21	CERAMIC	0.1uF		50V
C203	1-124-907-11	ELECT	10uF	20%	50V
< CONNECTOR >					
* CN201	1-568-947-11	PIN, CONNECTOR 9P			
< IC >					
IC201	8-759-365-94	IC TA8409S			
< COIL >					
L201	1-408-117-00	INDUCTOR 10uH			

Ref. No.	Part No.	Description	Remark		
< MOTOR >					
M201	A-4660-977-A	MOTOR ASSY (TABLE)			
< RESISTOR >					
R205	1-249-427-11	CARBON	6.8K	5%	1/4W F
R206	1-249-425-11	CARBON	4.7K	5%	1/4W F
< SWITCH >					
S201	1-762-587-11	SWITCH, PUSH (1 KEY) (UP)			

*	1-659-409-11	CD-R BOARD	*****		
< CONNECTOR >					
* CN514	1-568-936-11	PIN, CONNECTOR 9P			
< DIODE >					
D603	8-719-058-03	DIODE SEL5423E-TP15 (▷)			
D604	8-719-058-03	DIODE SEL5423E-TP15 (▷)			
D636	8-719-058-17	DIODE LNJ401NPYJA (■)			
D637	8-719-057-09	DIODE LNJ801LPDJA (AUTO PLAY)			
< RESISTOR >					
R553	1-249-411-11	CARBON	330	5%	1/4W
R554	1-249-413-11	CARBON	470	5%	1/4W F
R555	1-249-415-11	CARBON	680	5%	1/4W F
R556	1-249-417-11	CARBON	1K	5%	1/4W F
R557	1-249-419-11	CARBON	1.5K	5%	1/4W F
R678	1-247-815-91	CARBON	220	5%	1/4W
R680	1-247-815-91	CARBON	220	5%	1/4W
< SWITCH >					
S554	1-554-303-21	SWITCH, TACTILE (▷)			
S555	1-554-303-21	SWITCH, TACTILE (■)			
S556	1-554-303-21	SWITCH, TACTILE (■)			
S557	1-554-303-21	SWITCH, TACTILE (DISC SKIP)			
S558	1-554-303-21	SWITCH, TACTILE (AUTO PLAY)			

*	1-659-408-11	DOOR-SW BOARD	*****		
< CAPACITOR >					
C591	1-164-159-21	CERAMIC	0.1uF		50V
< CONNECTOR >					
CN519	1-506-481-11	PIN, CONNECTOR 2P			

DOOR-SW

HP

KEY CON

LEAF SWITCH

Ref. No.	Part No.	Description	Remark			
< SWITCH >						
S591	1-572-126-11	SWITCH, PUSH (1 KEY)(≡ OPEN)				

*	1-659-411-11	HP BOARD				

< CAPACITOR >						
C621	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C622	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C623	1-164-159-21	CERAMIC	0.1uF		50V	
< JACK >						
J601	1-569-113-11	JACK, LARGE TYPE (PHONES)				

*	A-4390-214-A	KEY CON BOARD, COMPLETE				

< CAPACITOR >						
C1401	1-164-159-21	CERAMIC	0.1uF		50V	
C1403	1-124-907-11	ELECT	10uF	20%	50V	
C1404	1-124-907-11	ELECT	10uF	20%	50V	
C1405	1-124-907-11	ELECT	10uF	20%	50V	
C1406	1-124-907-11	ELECT	10uF	20%	50V	
C1431	1-130-493-00	MYLAR	0.068uF	5%	50V	
C1432	1-130-493-00	MYLAR	0.068uF	5%	50V	
C1433	1-130-493-00	MYLAR	0.068uF	5%	50V	
C1434	1-162-284-31	CERAMIC	150PF	10%	50V	
C1436	1-104-664-11	ELECT	47uF	20%	10V	
C1437	1-164-159-21	CERAMIC	0.1uF		50V	
C1438	1-124-443-00	ELECT	100uF	20%	10V	
C1439	1-124-907-11	ELECT	10uF	20%	50V	
C1445	1-136-165-00	FILM	0.1uF	5%	50V	
C1446	1-136-165-00	FILM	0.1uF	5%	50V	
C1448	1-124-907-11	ELECT	10uF	20%	50V	
C1451	1-162-286-21	CERAMIC	220PF	10%	50V	
C1454	1-162-286-21	CERAMIC	220PF	10%	50V	
C1461	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C1462	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C1466	1-162-600-11	CERAMIC	0.0047uF	20%	16V	
C1467	1-162-291-31	CERAMIC	560PF	10%	50V	
C1468	1-162-290-31	CERAMIC	470PF	10%	50V	
C1469	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C1470	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C1471	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C1472	1-162-600-11	CERAMIC	0.0047uF	20%	16V	
< CONNECTOR >						
CN1401	1-566-999-11	PIN, CONNECTOR 13P				

Ref. No.	Part No.	Description	Remark			
		< IC >				
IC1401	8-759-370-84	IC M65847FP-TP				
IC1403	8-759-140-53	IC uPD4053BC				
		< COIL >				
L1401	1-410-521-11	INDUCTOR 100uH				
		< TRANSISTOR >				
Q1401	8-729-900-80	TRANSISTOR DTC114ES				
Q1403	8-729-119-78	TRANSISTOR 2SC2785-HFE				
		< RESISTOR >				
R1413	1-247-863-91	CARBON	22K	5%	1/4W	
R1414	1-247-863-91	CARBON	22K	5%	1/4W	
R1415	1-249-441-11	CARBON	100K	5%	1/4W	
R1416	1-249-441-11	CARBON	100K	5%	1/4W	
R1417	1-249-429-11	CARBON	10K	5%	1/4W	
R1418	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1419	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1421	1-249-417-11	CARBON	1K	5%	1/4W	F
R1422	1-249-429-11	CARBON	10K	5%	1/4W	
R1431	1-247-903-00	CARBON	1M	5%	1/4W	
R1435	1-247-807-31	CARBON	100	5%	1/4W	
R1436	1-249-429-11	CARBON	10K	5%	1/4W	
R1437	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1438	1-247-807-31	CARBON	100	5%	1/4W	
R1448	1-249-429-11	CARBON	10K	5%	1/4W	
R1450	1-249-441-11	CARBON	100K	5%	1/4W	
R1451	1-249-429-11	CARBON	10K	5%	1/4W	
R1452	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1453	1-249-429-11	CARBON	10K	5%	1/4W	
R1457	1-249-424-11	CARBON	3.9K	5%	1/4W	F
R1458	1-249-431-11	CARBON	15K	5%	1/4W	
R1459	1-249-429-11	CARBON	10K	5%	1/4W	
R1460	1-247-863-91	CARBON	22K	5%	1/4W	
R1461	1-249-434-11	CARBON	27K	5%	1/4W	
R1469	1-249-426-11	CARBON	5.6K	5%	1/4W	

*	1-650-669-11	LEAF SWITCH BOARD				

		< CONNECTOR >				
* CN1001	1-568-854-11	SOCKET, CONNECTOR 11P				
		< TRANSISTOR >				
Q1001	8-749-010-90	TRANSISTOR PHOTO REFLECTOR NJL5165KA-H2				
Q1002	8-749-010-90	TRANSISTOR PHOTO REFLECTOR NJL5165KA-H2				

LEAF SWITCH

LED

MAIN

Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark			
< RESISTOR >							C302	1-162-290-31	CERAMIC	470PF	10%	50V	
R1001	1-247-818-11	CARBON	300	5%	1/4W		C305	1-124-903-11	ELECT	1uF	20%	50V	
R1002	1-247-820-11	CARBON	360	5%	1/4W		C307	1-124-907-11	ELECT	10uF	20%	50V	
R1003	1-249-414-11	CARBON	560	5%	1/4W	F	C308	1-124-464-11	ELECT	0.22uF	20%	50V	
R1004	1-247-834-11	CARBON	1.3K	5%	1/4W		C309	1-124-903-11	ELECT	1uF	20%	50V	
R1005	1-247-818-11	CARBON	300	5%	1/4W		C310	1-124-443-00	ELECT	100uF	20%	10V	
< SWITCH >							C351	1-130-479-00	MYLAR	0.0047uF	5%	50V	
							C352	1-162-290-31	CERAMIC	470PF	10%	50V	
S1001	1-692-832-11	SWITCH, PUSH (1 KEY)(A PLAY)					C355	1-124-903-11	ELECT	1uF	20%	50V	
S1002	1-692-832-11	SWITCH, PUSH (1 KEY)(B PLAY)					C357	1-124-907-11	ELECT	10uF	20%	50V	
S1003	1-572-248-11	SWITCH, LEAF (A HALF)					C358	1-124-464-11	ELECT	0.22uF	20%	50V	
S1004	1-571-281-21	SWITCH, LEAF (A CrO2)					C359	1-124-903-11	ELECT	1uF	20%	50V	
S1005	1-571-281-21	SWITCH, LEAF (REC A)					C360	1-124-443-00	ELECT	100uF	20%	10V	
S1006	1-572-248-11	SWITCH, LEAF (B HALF)					C401	1-164-159-21	CERAMIC	0.1uF		50V	
S1008	1-571-281-21	SWITCH, LEAF (B CrO2)					C402	1-164-159-21	CERAMIC	0.1uF		50V	
S1009	1-571-281-21	SWITCH, LEAF (REC B)					C403	1-164-159-21	CERAMIC	0.1uF		50V	
*****							C404	1-126-933-11	ELECT	100uF	20%	16V	
							C405	1-126-952-11	ELECT	1000uF	20%	16V	
*	1-659-059-13	LED BOARD					C701	1-162-306-11	CERAMIC	0.01uF	30%	16V	
*****							C702	1-126-952-11	ELECT	1000uF	20%	16V	
< DIODE >							C703	1-124-907-11	ELECT	10uF	20%	50V	
D201	8-719-032-98	DIODE SEL5820A (DISC No.)					C704	1-136-165-00	FILM	0.1uF	5%	50V	
							C705	1-136-165-00	FILM	0.1uF	5%	50V	
< TRANSISTOR >							C706	1-126-965-11	ELECT	22uF	20%	50V	
Q201	8-729-119-78	TRANSISTOR 2SC2785-HFE					C707	1-162-205-31	CERAMIC	18PF	5%	50V	
							C708	1-162-205-31	CERAMIC	18PF	5%	50V	
< RESISTOR >							C709	1-164-159-21	CERAMIC	0.1uF		50V	
R201	1-247-863-91	CARBON	22K	5%	1/4W		C710	1-162-306-11	CERAMIC	0.01uF	30%	16V	
R202	1-249-411-11	CARBON	330	5%	1/4W		C713	1-162-306-11	CERAMIC	0.01uF	30%	16V	
R203	1-249-437-11	CARBON	47K	5%	1/4W		C789	1-126-923-11	ELECT	220uF	20%	10V	
*****							C802	1-164-159-21	CERAMIC	0.1uF		50V	
							C803	1-162-282-31	CERAMIC	100PF	10%	50V	
							C804	1-162-282-31	CERAMIC	100PF	10%	50V	
< CAPACITOR >							C805	1-126-961-11	ELECT	2.2uF	20%	50V	
C201	1-126-961-11	ELECT	2.2uF	20%	50V	C806	1-162-600-11	CERAMIC	0.0047uF	30%	16V		
C202	1-162-600-11	CERAMIC	0.0047uF	30%	16V	C807	1-162-301-11	CERAMIC	0.0015uF	30%	16V		
C203	1-124-472-11	ELECT	470uF	20%	10V	C808	1-136-495-11	FILM	0.068uF	5%	50V		
C204	1-162-282-31	CERAMIC	100PF	10%	50V	C810	1-162-306-11	CERAMIC	0.01uF	30%	16V		
C205	1-162-282-31	CERAMIC	100PF	10%	50V	C811	1-162-306-11	CERAMIC	0.01uF	30%	16V		
C209	1-126-916-11	ELECT	1000uF	20%	6.3V	C821	1-162-286-21	CERAMIC	220PF	10%	50V		
C213	1-164-159-21	CERAMIC	0.1uF		50V	C825	1-109-889-11	ELECT	1uF	20%	50V		
C214	1-164-159-21	CERAMIC	0.1uF		50V	C853	1-162-282-31	CERAMIC	100PF	10%	50V		
C216	1-164-159-21	CERAMIC	0.1uF		50V	C854	1-162-282-31	CERAMIC	100PF	10%	50V		
C251	1-126-961-11	ELECT	2.2uF	20%	50V	C855	1-126-961-11	ELECT	2.2uF	20%	50V		
C252	1-162-600-11	CERAMIC	0.0047uF	30%	16V	C856	1-162-600-11	CERAMIC	0.0047uF	30%	16V		
C301	1-130-479-00	MYLAR	0.0047uF	5%	50V	C857	1-162-301-11	CERAMIC	0.0015uF	30%	16V		
							C858	1-136-495-11	FILM	0.068uF	5%	50V	
							C871	1-162-286-21	CERAMIC	220PF	10%	50V	
							C901	1-136-169-00	FILM	0.22uF	5%	50V	
							C902	1-136-169-00	FILM	0.22uF	5%	50V	
							C903	1-136-495-11	FILM	0.068uF	5%	50V	
							C904	1-136-495-11	FILM	0.068uF	5%	50V	

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C905	1-136-156-00	FILM	0.018uF	5%	50V	C1019	1-126-934-11	ELECT	220uF	20%	16V
C906	1-136-156-00	FILM	0.018uF	5%	50V	C1020	1-124-910-11	ELECT	47uF	20%	50V
C907	1-130-480-00	MYLAR	0.0056uF	5%	50V	C1021	1-124-907-11	ELECT	10uF	20%	50V
C908	1-130-479-00	MYLAR	0.0047uF	5%	50V	C1022	1-124-122-11	ELECT	100uF	20%	50V
C909	1-130-474-00	MYLAR	0.0018uF	5%	50V	C1023	1-124-122-11	ELECT	100uF	20%	50V
C910	1-124-907-11	ELECT	10uF	20%	50V	C1025	1-126-925-11	ELECT	470uF	20%	10V
C911	1-124-907-11	ELECT	10uF	20%	50V	C1026	1-126-925-11	ELECT	470uF	20%	10V
C912	1-136-169-00	FILM	0.22uF	5%	50V	C1221	1-124-443-00	ELECT	100uF	20%	10V
C913	1-136-169-00	FILM	0.22uF	5%	50V	C1222	1-124-443-00	ELECT	100uF	20%	10V
C914	1-124-907-11	ELECT	10uF	20%	50V	C1223	1-126-923-11	ELECT	220uF	20%	10V
C915	1-136-153-00	FILM	0.01uF	5%	50V	C1224	1-126-961-11	ELECT	2.2uF	20%	50V
C930	1-136-167-00	FILM	0.15uF	5%	50V	C1230	1-126-974-11	ELECT	3300uF	20%	50V
C931	1-130-471-00	MYLAR	0.001uF	5%	50V	C1235	1-126-974-11	ELECT	3300uF	20%	50V
C933	1-124-902-00	ELECT	0.47uF	20%	50V	C1270	1-130-781-00	FILM	0.22uF	10%	100V
C935	1-164-159-21	CERAMIC	0.1uF		50V	C1271	1-130-781-00	FILM	0.22uF	10%	100V
C936	1-124-907-11	ELECT	10uF	20%	50V	C1301	1-124-903-11	ELECT	1uF	20%	50V
C938	1-162-290-31	CERAMIC	470PF	10%	50V	C1302	1-124-903-11	ELECT	1uF	20%	50V
C939	1-104-664-11	ELECT	47uF	20%	10V	< CONNECTOR >					
C940	1-104-664-11	ELECT	47uF	20%	10V	CN201	1-770-067-11	CONNECTOR, FFC/FPC 19P			
C945	1-164-159-21	CERAMIC	0.1uF		50V	* CN203	1-568-936-11	PIN, CONNECTOR 9P			
C951	1-136-169-00	FILM	0.22uF	5%	50V	CN401	1-568-838-11	SOCKET, CONNECTOR 21P			
C952	1-136-169-00	FILM	0.22uF	5%	50V	* CN402	1-568-830-11	SOCKET, CONNECTOR 11P			
C953	1-136-495-11	FILM	0.068uF	5%	50V	* CN403	1-568-449-11	HOUSING, CONNECTOR (PC BOARD) 3P			
C954	1-136-495-11	FILM	0.068uF	5%	50V	* CN702	1-568-841-11	SOCKET, CONNECTOR 25P			
C955	1-136-156-00	FILM	0.018uF	5%	50V	* CN703	1-568-832-11	SOCKET, CONNECTOR 13P			
C956	1-136-156-00	FILM	0.018uF	5%	50V	< DIODE >					
C957	1-130-480-00	MYLAR	0.0056uF	5%	50V	D201	8-719-987-63	DIODE 1N4148M			
C958	1-130-479-00	MYLAR	0.0047uF	5%	50V	D202	8-719-987-63	DIODE 1N4148M			
C959	1-130-474-00	MYLAR	0.0018uF	5%	50V	D401	8-719-933-54	DIODE HZS9A2L			
C960	1-124-907-11	ELECT	10uF	20%	50V	D701	8-719-987-63	DIODE 1N4148M			
C961	1-124-907-11	ELECT	10uF	20%	50V	D702	8-719-987-63	DIODE 1N4148M			
C962	1-136-169-00	FILM	0.22uF	5%	50V	D703	8-719-987-63	DIODE 1N4148M			
C963	1-136-169-00	FILM	0.22uF	5%	50V	D704	8-719-987-63	DIODE 1N4148M			
C964	1-124-907-11	ELECT	10uF	20%	50V	D705	8-719-987-63	DIODE 1N4148M			
C965	1-136-153-00	FILM	0.01uF	5%	50V	D706	8-719-200-82	DIODE 11ES2			
C1001	1-126-937-11	ELECT	4700uF	20%	16V	D708	8-719-987-63	DIODE 1N4148M			
C1002	1-126-768-11	ELECT	2200uF	20%	16V	D721	8-719-987-63	DIODE 1N4148M			
C1003	1-124-907-11	ELECT	10uF	20%	50V	D722	8-719-987-63	DIODE 1N4148M			
C1005	1-124-907-11	ELECT	10uF	20%	50V	D1001	8-719-200-82	DIODE 11ES2			
C1006	1-124-443-00	ELECT	100uF	20%	10V	D1003	8-719-200-82	DIODE 11ES2			
C1007	1-126-934-11	ELECT	220uF	20%	16V	D1004	8-719-200-82	DIODE 11ES2			
C1008	1-126-933-11	ELECT	100uF	20%	16V	D1005	8-719-200-82	DIODE 11ES2			
C1010	1-136-165-00	FILM	0.1uF	5%	50V	D1006	8-719-200-82	DIODE 11ES2			
C1011	1-136-165-00	FILM	0.1uF	5%	50V	D1007	8-719-987-63	DIODE 1N4148M			
C1012	1-124-907-11	ELECT	10uF	20%	50V	D1008	8-719-001-43	DIODE UZL-11M1-TA			
C1013	1-126-916-11	ELECT	1000uF	20%	6.3V	D1009	8-719-987-63	DIODE 1N4148M			
C1014	1-124-907-11	ELECT	10uF	20%	50V	D1010	8-719-987-63	DIODE 1N4148M			
C1015	1-124-907-11	ELECT	10uF	20%	50V	D1011	8-719-010-43	DIODE UZ-5.6BSC			
C1016	1-126-925-11	ELECT	470uF	20%	10V	D1013	8-719-200-82	DIODE 11ES2			
C1017	1-126-925-11	ELECT	470uF	20%	10V	D1014	8-719-200-82	DIODE 11ES2			
C1018	1-126-942-61	ELECT	1000uF	20%	25V						

MAIN

Ref. No.	Part No.	Description	Remark
D1016	8-719-200-82	DIODE 11ES2	
D1017	8-719-200-82	DIODE 11ES2	
D1018	8-719-200-82	DIODE 11ES2	
D1021	8-719-200-82	DIODE 11ES2	
D1022	8-719-200-82	DIODE 11ES2	
D1023	8-719-011-10	DIODE UZ-30BS-TA	
D1059	8-719-987-63	DIODE 1N4148M	
D1069	8-719-987-63	DIODE 1N4148M	
D1204	8-719-987-63	DIODE 1N4148M	
D1205	8-719-987-63	DIODE 1N4148M	
D1230	8-719-987-63	DIODE 1N4148M	
D1250	8-719-510-68	DIODE D5SBA20F01	
D1309	8-719-987-63	DIODE 1N4148M	
D1310	8-719-987-63	DIODE 1N4148M	
< IC >			
IC401	8-759-289-39	IC HA12196NT	
IC402	8-759-822-09	IC LB1641	
IC701	8-759-451-82	IC TMP87CS64YF-6521	
IC702	8-759-165-80	IC PST600C-T	
IC801	8-759-634-51	IC M5218AP	
IC802	8-759-000-48	IC MC14052BCP	
IC901	8-759-331-39	IC M62427FP	
IC902	8-759-634-51	IC M5218AP	
IC1001	8-759-231-53	IC TA7805S	
IC1002	8-759-604-86	IC M5F7807L	
IC1003	8-759-604-86	IC M5F7807L	
IC1004	8-759-604-90	IC M5F7907L	
IC1202	8-759-111-68	IC uPC1237HA	
< JACK >			
J801	1-695-188-31	JACK, PIN 4P (PHONO, VIDEO (AUDIO) IN)	
< COIL >			
L1201	1-420-872-00	COIL, AIR-CORE	
L1251	1-420-872-00	COIL, AIR-CORE	
< TRANSISTOR >			
Q301	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q351	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q401	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q402	8-729-900-65	TRANSISTOR DTA144ES	
Q403	8-729-801-93	TRANSISTOR 2SD1387	
Q406	8-729-900-80	TRANSISTOR DTC114ES	
Q407	8-729-422-57	TRANSISTOR UN4111	
Q408	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q409	8-729-900-80	TRANSISTOR DTC114ES	
Q410	8-729-900-65	TRANSISTOR DTA144ES	
Q411	8-729-900-65	TRANSISTOR DTA144ES	
Q412	8-729-900-65	TRANSISTOR DTA144ES	
Q701	8-729-119-78	TRANSISTOR 2SC2785-HFE	

Ref. No.	Part No.	Description	Remark
Q820	8-729-422-57	TRANSISTOR UN4111	
Q901	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q902	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q951	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q952	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q953	8-729-141-26	TRANSISTOR 2SC3622A-LK	
Q954	8-729-141-26	TRANSISTOR 2SC3622A-LK	
Q1001	8-729-118-01	TRANSISTOR 2SB1116-K	
Q1002	8-729-900-36	TRANSISTOR DTC124ES	
Q1003	8-729-021-82	TRANSISTOR 2SD2396K	
Q1006	8-729-030-19	TRANSISTOR 2SB1640	
Q1204	8-729-900-63	TRANSISTOR DTA124ES	
Q1205	8-729-904-39	TRANSISTOR DTC114TS	
Q1206	8-729-904-39	TRANSISTOR DTC114TS	
Q1207	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1208	8-729-119-76	TRANSISTOR 2SA1175-HFE	
< RESISTOR >			
R201	1-249-415-11	CARBON 680	5% 1/4W F
R202	1-249-435-11	CARBON 33K	5% 1/4W
R203	1-249-425-11	CARBON 4.7K	5% 1/4W F
R206	1-249-425-11	CARBON 4.7K	5% 1/4W F
R207	1-249-425-11	CARBON 4.7K	5% 1/4W F
R208	1-249-425-11	CARBON 4.7K	5% 1/4W F
R251	1-249-415-11	CARBON 680	5% 1/4W F
R252	1-249-435-11	CARBON 33K	5% 1/4W
R301	1-249-430-11	CARBON 12K	5% 1/4W
R302	1-249-431-11	CARBON 15K	5% 1/4W
R304	1-249-432-11	CARBON 18K	5% 1/4W
R305	1-249-417-11	CARBON 1K	5% 1/4W F
R306	1-247-840-00	CARBON 2.4K	5% 1/4W
R307	1-247-863-91	CARBON 22K	5% 1/4W
R308	1-249-421-11	CARBON 2.2K	5% 1/4W F
R309	1-249-428-11	CARBON 8.2K	5% 1/4W F
R310	1-249-417-11	CARBON 1K	5% 1/4W F
R351	1-249-430-11	CARBON 12K	5% 1/4W
R352	1-249-431-11	CARBON 15K	5% 1/4W
R354	1-249-432-11	CARBON 18K	5% 1/4W
R355	1-249-417-11	CARBON 1K	5% 1/4W F
R356	1-247-840-00	CARBON 2.4K	5% 1/4W
R357	1-247-863-91	CARBON 22K	5% 1/4W
R358	1-249-421-11	CARBON 2.2K	5% 1/4W F
R359	1-249-428-11	CARBON 8.2K	5% 1/4W F
R360	1-249-417-11	CARBON 1K	5% 1/4W F
R401	1-249-425-11	CARBON 4.7K	5% 1/4W F
R402	1-249-425-11	CARBON 4.7K	5% 1/4W F
R403	1-249-425-11	CARBON 4.7K	5% 1/4W F
R404	1-249-417-11	CARBON 1K	5% 1/4W F
R405	1-249-437-11	CARBON 47K	5% 1/4W
R406	1-249-437-11	CARBON 47K	5% 1/4W
R407	1-249-437-11	CARBON 47K	5% 1/4W
R408	1-249-437-11	CARBON 47K	5% 1/4W

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R409	1-249-429-11	CARBON	10K	5%	1/4W	R742	1-247-807-31	CARBON	100	5%	1/4W
R410	1-247-882-11	CARBON	130K	5%	1/4W	R743	1-247-807-31	CARBON	100	5%	1/4W
R411	1-247-866-11	CARBON	30K	5%	1/4W	R744	1-247-807-31	CARBON	100	5%	1/4W
R413	1-247-864-11	CARBON	24K	5%	1/4W	R745	1-247-807-31	CARBON	100	5%	1/4W
R414	1-249-429-11	CARBON	10K	5%	1/4W	R746	1-249-429-11	CARBON	10K	5%	1/4W
R415	1-249-429-11	CARBON	10K	5%	1/4W	R747	1-249-429-11	CARBON	10K	5%	1/4W
R416	1-249-429-11	CARBON	10K	5%	1/4W	R748	1-249-429-11	CARBON	10K	5%	1/4W
R417	1-249-429-11	CARBON	10K	5%	1/4W	R749	1-249-429-11	CARBON	10K	5%	1/4W
R418	1-249-429-11	CARBON	10K	5%	1/4W	R750	1-247-807-31	CARBON	100	5%	1/4W
R419	1-249-429-11	CARBON	10K	5%	1/4W	R751	1-247-807-31	CARBON	100	5%	1/4W
R454	1-247-863-91	CARBON	22K	5%	1/4W	R752	1-247-807-31	CARBON	100	5%	1/4W
R455	1-247-863-91	CARBON	22K	5%	1/4W	R753	1-247-807-31	CARBON	100	5%	1/4W
R456	1-249-411-11	CARBON	330	5%	1/4W	R754	1-247-807-31	CARBON	100	5%	1/4W
R457	1-249-427-11	CARBON	6.8K	5%	1/4W F	R755	1-247-807-31	CARBON	100	5%	1/4W
R458	1-249-429-11	CARBON	10K	5%	1/4W	R756	1-249-429-11	CARBON	10K	5%	1/4W
R461	1-249-417-11	CARBON	1K	5%	1/4W F	R757	1-247-807-31	CARBON	100	5%	1/4W
R701	1-249-429-11	CARBON	10K	5%	1/4W	R758	1-247-807-31	CARBON	100	5%	1/4W
R702	1-249-437-11	CARBON	47K	5%	1/4W	R759	1-247-807-31	CARBON	100	5%	1/4W
R703	1-249-437-11	CARBON	47K	5%	1/4W	R760	1-247-807-31	CARBON	100	5%	1/4W
R704	1-249-429-11	CARBON	10K	5%	1/4W	R761	1-247-807-31	CARBON	100	5%	1/4W
R705	1-249-429-11	CARBON	10K	5%	1/4W	R762	1-249-429-11	CARBON	10K	5%	1/4W
R708	1-249-429-11	CARBON	10K	5%	1/4W	R763	1-249-429-11	CARBON	10K	5%	1/4W
R709	1-249-429-11	CARBON	10K	5%	1/4W	R764	1-249-429-11	CARBON	10K	5%	1/4W
R710	1-249-429-11	CARBON	10K	5%	1/4W	R765	1-249-429-11	CARBON	10K	5%	1/4W
R711	1-249-429-11	CARBON	10K	5%	1/4W	R766	1-249-429-11	CARBON	10K	5%	1/4W
R712	1-249-429-11	CARBON	10K	5%	1/4W	R767	1-249-429-11	CARBON	10K	5%	1/4W
R713	1-249-429-11	CARBON	10K	5%	1/4W	R768	1-249-429-11	CARBON	10K	5%	1/4W
R714	1-249-429-11	CARBON	10K	5%	1/4W	R802	1-249-417-11	CARBON	1K	5%	1/4W F
R715	1-249-429-11	CARBON	10K	5%	1/4W	R803	1-249-437-11	CARBON	47K	5%	1/4W
R716	1-247-807-31	CARBON	100	5%	1/4W	R804	1-249-417-11	CARBON	1K	5%	1/4W F
R717	1-247-807-31	CARBON	100	5%	1/4W	R805	1-247-897-11	CARBON	560K	5%	1/4W
R718	1-247-807-31	CARBON	100	5%	1/4W	R806	1-249-437-11	CARBON	47K	5%	1/4W
R719	1-247-807-31	CARBON	100	5%	1/4W	R807	1-249-417-11	CARBON	1K	5%	1/4W F
R720	1-247-807-31	CARBON	100	5%	1/4W	R808	1-249-441-11	CARBON	100K	5%	1/4W
R721	1-247-807-31	CARBON	100	5%	1/4W	R821	1-249-417-11	CARBON	1K	5%	1/4W F
R724	1-247-807-31	CARBON	100	5%	1/4W	R822	1-249-441-11	CARBON	100K	5%	1/4W
R725	1-247-807-31	CARBON	100	5%	1/4W	R826	1-249-441-11	CARBON	100K	5%	1/4W
R726	1-247-807-31	CARBON	100	5%	1/4W	R829	1-249-421-11	CARBON	2.2K	5%	1/4W F
R727	1-247-807-31	CARBON	100	5%	1/4W	R852	1-249-417-11	CARBON	1K	5%	1/4W F
R728	1-247-807-31	CARBON	100	5%	1/4W	R853	1-249-437-11	CARBON	47K	5%	1/4W
R729	1-247-807-31	CARBON	100	5%	1/4W	R854	1-249-417-11	CARBON	1K	5%	1/4W F
R730	1-247-807-31	CARBON	100	5%	1/4W	R855	1-247-897-11	CARBON	560K	5%	1/4W
R731	1-247-807-31	CARBON	100	5%	1/4W	R856	1-249-437-11	CARBON	47K	5%	1/4W
R732	1-247-807-31	CARBON	100	5%	1/4W	R857	1-249-417-11	CARBON	1K	5%	1/4W F
R733	1-247-807-31	CARBON	100	5%	1/4W	R858	1-249-441-11	CARBON	100K	5%	1/4W
R734	1-247-807-31	CARBON	100	5%	1/4W	R871	1-249-417-11	CARBON	1K	5%	1/4W F
R735	1-247-807-31	CARBON	100	5%	1/4W	R872	1-249-441-11	CARBON	100K	5%	1/4W
R736	1-247-807-31	CARBON	100	5%	1/4W	R902	1-249-425-11	CARBON	4.7K	5%	1/4W F
R737	1-247-807-31	CARBON	100	5%	1/4W	R903	1-249-437-11	CARBON	47K	5%	1/4W
R740	1-247-843-11	CARBON	3.3K	5%	1/4W	R905	1-249-441-11	CARBON	100K	5%	1/4W
R741	1-249-429-11	CARBON	10K	5%	1/4W	R906	1-247-895-91	CARBON	470K	5%	1/4W
						R907	1-249-437-11	CARBON	47K	5%	1/4W

MAIN

MIC

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
R908	1-249-429-11	CARBON	10K	5%	1/4W		R1236	1-249-441-11	CARBON	100K	5%	1/4W	
R909	1-249-411-11	CARBON	330	5%	1/4W								
R910	1-249-429-11	CARBON	10K	5%	1/4W		R1237	1-249-429-11	CARBON	10K	5%	1/4W	
							R1238	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R911	1-249-421-11	CARBON	2.2K	5%	1/4W	F	R1240	1-249-438-11	CARBON	56K	5%	1/4W	
R912	1-249-441-11	CARBON	100K	5%	1/4W		R1241	1-247-791-91	CARBON	22	5%	1/4W	
R913	1-249-429-11	CARBON	10K	5%	1/4W		R1245	1-247-863-91	CARBON	22K	5%	1/4W	
R914	1-249-437-11	CARBON	47K	5%	1/4W								
R915	1-249-441-11	CARBON	100K	5%	1/4W		R1250	1-249-429-11	CARBON	10K	5%	1/4W	
							R1264	1-249-429-11	CARBON	10K	5%	1/4W	
R916	1-249-441-11	CARBON	100K	5%	1/4W		R1265	1-249-429-11	CARBON	10K	5%	1/4W	
R917	1-247-903-00	CARBON	1M	5%	1/4W		R1266	1-249-429-11	CARBON	10K	5%	1/4W	
R918	1-249-429-11	CARBON	10K	5%	1/4W		R1267	1-249-429-11	CARBON	10K	5%	1/4W	
R920	1-249-441-11	CARBON	100K	5%	1/4W								
R930	1-247-863-91	CARBON	22K	5%	1/4W		R1270	1-249-389-11	CARBON	4.7	5%	1/4W	F
							R1271	1-249-389-11	CARBON	4.7	5%	1/4W	F
R931	1-247-863-91	CARBON	22K	5%	1/4W		R1272	1-260-091-11	CARBON	220	5%	1/2W	
R932	1-249-429-11	CARBON	10K	5%	1/4W		R1273	1-260-091-11	CARBON	220	5%	1/2W	
R933	1-247-895-91	CARBON	470K	5%	1/4W		R1290	1-249-437-11	CARBON	47K	5%	1/4W	
R935	1-249-437-11	CARBON	47K	5%	1/4W								
R938	1-247-807-31	CARBON	100	5%	1/4W		R1295	1-247-863-91	CARBON	22K	5%	1/4W	
							R1303	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R940	1-249-429-11	CARBON	10K	5%	1/4W		R1304	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R941	1-249-429-11	CARBON	10K	5%	1/4W								
R942	1-249-429-11	CARBON	10K	5%	1/4W								
R952	1-249-425-11	CARBON	4.7K	5%	1/4W	F							
R953	1-249-437-11	CARBON	47K	5%	1/4W								
R955	1-249-441-11	CARBON	100K	5%	1/4W								
R956	1-247-895-91	CARBON	470K	5%	1/4W								
R957	1-249-437-11	CARBON	47K	5%	1/4W								
R958	1-249-429-11	CARBON	10K	5%	1/4W								
R959	1-249-411-11	CARBON	330	5%	1/4W								
R960	1-249-429-11	CARBON	10K	5%	1/4W								
R961	1-249-421-11	CARBON	2.2K	5%	1/4W	F							
R962	1-249-441-11	CARBON	100K	5%	1/4W								
R963	1-249-429-11	CARBON	10K	5%	1/4W								
R964	1-249-437-11	CARBON	47K	5%	1/4W								
R965	1-249-441-11	CARBON	100K	5%	1/4W								
R966	1-249-441-11	CARBON	100K	5%	1/4W								
R967	1-247-903-00	CARBON	1M	5%	1/4W								
R968	1-249-429-11	CARBON	10K	5%	1/4W								
R970	1-247-903-00	CARBON	1M	5%	1/4W								
R1002	1-247-815-91	CARBON	220	5%	1/4W								
R1003	1-249-417-11	CARBON	1K	5%	1/4W	F							
R1007	1-249-417-11	CARBON	1K	5%	1/4W	F							
R1020	1-247-815-91	CARBON	220	5%	1/4W								
R1021	1-247-815-91	CARBON	220	5%	1/4W								
R1023	1-249-417-11	CARBON	1K	5%	1/4W	F							
R1220	1-249-389-11	CARBON	4.7	5%	1/4W	F							
R1221	1-249-389-11	CARBON	4.7	5%	1/4W	F							
R1222	1-260-091-11	CARBON	220	5%	1/2W								
R1223	1-260-091-11	CARBON	220	5%	1/2W								
△ R1226	1-216-456-00	METAL OXIDE	820	5%	2W	F							
R1233	1-249-425-11	CARBON	4.7K	5%	1/4W	F							
R1234	1-249-425-11	CARBON	4.7K	5%	1/4W	F							
R1235	1-249-435-11	CARBON	33K	5%	1/4W								

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

MIC

PANEL

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
C921	1-162-306-11	CERAMIC	0.01uF	30%	16V		C523	1-126-177-11	ELECT	100uF	20%	10V	
C931	1-104-396-11	ELECT	10uF	20%	16V		C524	1-126-177-11	ELECT	100uF	20%	10V	
C941	1-104-396-11	ELECT	10uF	20%	16V		C545	1-162-306-11	CERAMIC	0.01uF	30%	16V	
< IC >							C546	1-162-306-11	CERAMIC	0.01uF	30%	16V	
IC901	8-759-634-51	IC M5218AP					C547	1-104-396-11	ELECT	10uF	20%	16V	
< JACK >							C549	1-126-177-11	ELECT	100uF	20%	10V	
J901	1-573-151-11	JACK, LARGE TYPE (MIC1)					C601	1-104-396-11	ELECT	10uF	20%	16V	
J902	1-573-151-11	JACK, LARGE TYPE (MIC2)					C832	1-130-473-00	MYLAR	0.0015uF	5%	50V	
< RESISTOR >							C833	1-126-301-11	ELECT	1uF	20%	50V	
R900	1-249-417-11	CARBON	1K	5%	1/4W F		C834	1-130-479-00	MYLAR	0.0047uF	5%	50V	
R901	1-249-429-11	CARBON	10K	5%	1/4W		C835	1-126-301-11	ELECT	1uF	20%	50V	
R902	1-249-417-11	CARBON	1K	5%	1/4W F		C836	1-136-495-11	FILM	0.068uF	5%	50V	
R903	1-249-441-11	CARBON	100K	5%	1/4W		C837	1-126-786-11	ELECT	47uF	20%	16V	
R904	1-249-417-11	CARBON	1K	5%	1/4W F		C838	1-136-165-00	FILM	0.1uF	5%	50V	
R905	1-247-863-91	CARBON	22K	5%	1/4W		C839	1-136-165-00	FILM	0.1uF	5%	50V	
R906	1-247-838-00	CARBON	2K	5%	1/4W		C840	1-162-305-11	CERAMIC	0.0068uF	30%	16V	
R907	1-247-863-91	CARBON	22K	5%	1/4W		C841	1-136-495-11	FILM	0.068uF	5%	50V	
R911	1-249-441-11	CARBON	100K	5%	1/4W		C842	1-130-479-00	MYLAR	0.0047uF	5%	50V	
R921	1-249-429-11	CARBON	10K	5%	1/4W		C843	1-130-473-00	MYLAR	0.0015uF	5%	50V	
R922	1-249-417-11	CARBON	1K	5%	1/4W F		C844	1-126-301-11	ELECT	1uF	20%	50V	
R931	1-247-887-00	CARBON	220K	5%	1/4W		C845	1-161-494-00	CERAMIC	0.022uF		25V	
< VARIABLE RESISTOR >							C846	1-126-177-11	ELECT	100uF	20%	10V	
RV901	1-223-983-11	RES, VAR, CARBON 50K (MIC LEVEL)					C847	1-164-159-21	CERAMIC	0.1uF		50V	
*****							C848	1-162-290-31	CERAMIC	470PF	10%	50V	
*	A-4392-044-A	PANEL BOARD, COMPLETE					C849	1-162-290-31	CERAMIC	470PF	10%	50V	
	*****						C850	1-126-177-11	ELECT	100uF	20%	10V	
	4-971-014-11	HOLDER, FL TUBE					C861	1-126-096-11	ELECT	10uF	20%	35V	
	< CAPACITOR >						C862	1-126-096-11	ELECT	10uF	20%	35V	
	C501	1-126-160-11	ELECT	1uF	20%	50V	C863	1-164-159-21	CERAMIC	0.1uF		50V	
	C502	1-164-159-21	CERAMIC	0.1uF		50V	C864	1-126-157-11	ELECT	10uF	20%	16V	
	C503	1-126-160-11	ELECT	1uF	20%	50V	C865	1-164-159-21	CERAMIC	0.1uF		50V	
	C504	1-164-159-21	CERAMIC	0.1uF		50V	C867	1-124-455-00	ELECT	100uF	20%	16V	
	C505	1-162-294-31	CERAMIC	0.001uF	10%	50V	C882	1-162-215-31	CERAMIC	47PF	5%	50V	
	C506	1-124-584-00	ELECT	100uF	20%	10V	C884	1-162-290-31	CERAMIC	470PF	10%	50V	
C511	1-164-159-21	CERAMIC	0.1uF		50V	C885	1-162-282-31	CERAMIC	100PF	10%	50V		
C512	1-164-159-21	CERAMIC	0.1uF		50V	C886	1-124-257-00	ELECT	2.2uF	20%	50V		
C513	1-164-159-21	CERAMIC	0.1uF		50V	C887	1-162-215-31	CERAMIC	47PF	5%	50V		
C514	1-164-159-21	CERAMIC	0.1uF		50V	C3002	1-164-159-21	CERAMIC	0.1uF		50V		
C515	1-126-793-11	ELECT	33uF	20%	35V	C3010	1-162-294-31	CERAMIC	0.001uF	10%	50V		
C518	1-104-396-11	ELECT	10uF	20%	16V	C3034	1-124-584-00	ELECT	100uF	20%	10V		
C519	1-164-159-21	CERAMIC	0.1uF		50V	C3048	1-126-177-11	ELECT	100uF	20%	10V		
C520	1-164-159-21	CERAMIC	0.1uF		50V	C3049	1-164-159-21	CERAMIC	0.1uF		50V		
C521	1-164-159-21	CERAMIC	0.1uF		50V	C3201	1-126-163-11	ELECT	4.7uF	20%	50V		
C522	1-164-159-21	CERAMIC	0.1uF		50V	C3202	1-136-169-00	FILM	0.22uF	5%	50V		
						C3203	1-124-464-11	ELECT	0.22uF	20%	50V		
						C3205	1-164-159-21	CERAMIC	0.1uF		50V		
						C3206	1-164-159-21	CERAMIC	0.1uF		50V		
						C3211	1-126-160-11	ELECT	1uF	20%	50V		
						C3212	1-136-155-00	FILM	0.015uF	5%	50V		
						C3213	1-124-464-11	ELECT	0.22uF	20%	50V		
						C3221	1-136-167-00	FILM	0.15uF	5%	50V		
						C3222	1-162-302-11	CERAMIC	0.0022uF	30%	16V		

PANEL

Ref. No.	Part No.	Description	Remark		
C3223	1-124-464-11	ELECT	0.22uF	20%	50V
C3232	1-162-293-31	CERAMIC	820PF	10%	50V
C3233	1-124-464-11	ELECT	0.22uF	20%	50V
< CONNECTOR >					
* CN501	1-568-841-11	SOCKET, CONNECTOR 25P			
< DIODE >					
D511	8-719-987-63	DIODE 1N4148M			
D512	8-719-987-63	DIODE 1N4148M			
D601	8-719-058-03	DIODE SEL5423E-TP15 (TUNER/BAND)			
D602	8-719-058-03	DIODE SEL5423E-TP15 (TUNER/BAND)			
D611	8-719-058-04	DIODE SEL5223S-TP15 (EFFECT)			
D612	8-719-058-04	DIODE SEL5223S-TP15 (ROCK GAME)			
D613	8-719-058-04	DIODE SEL5223S-TP15 (POPS. DANCE)			
D614	8-719-058-04	DIODE SEL5223S-TP15 (JAZZ. PARTY)			
D615	8-719-058-04	DIODE SEL5223S-TP15 (CLASSIC. NIGHT)			
D616	8-719-058-04	DIODE SEL5223S-TP15 (SALSA. MOVIE)			
D617	8-719-058-04	DIODE SEL5223S-TP15 (P. FILE)			
D618	8-719-058-04	DIODE SEL5223S-TP15 (MORE 5)			
D619	8-719-057-09	DIODE LNJ801LPDJA (ENTER/ENXT)			
D620	8-719-058-04	DIODE SEL5223S-TP15 (SELECT 5)			
D621	8-719-057-97	DIODE SEL5923A-TP15 (ECHO)			
D622	8-719-058-04	DIODE SEL5223S-TP15 (KEY CONTROL)			
D627	8-719-058-04	DIODE SEL5223S-TP15 (SUPER TWEETER)			
D861	8-719-987-63	DIODE 1N4148M			
D862	8-719-987-63	DIODE 1N4148M			
D3026	8-719-987-63	DIODE 1N4148M			
D3027	8-719-987-63	DIODE 1N4148M			
D3028	8-719-987-63	DIODE 1N4148M			
D3029	8-719-987-63	DIODE 1N4148M			
D3201	8-719-987-63	DIODE 1N4148M			
D3211	8-719-987-63	DIODE 1N4148M			
D3221	8-719-987-63	DIODE 1N4148M			
D3231	8-719-987-63	DIODE 1N4148M			
< FLUORESCENT INDICATOR >					
FL501	1-517-490-21	INDICATOR TUBE, FLUORESCENT			
< IC >					
IC501	8-759-375-43	IC ASD0204GF-012-3BA			
IC502	8-759-339-53	IC GP1U28XB			
IC503	8-759-140-53	IC uPD4053BC			
IC504	8-759-916-14	IC SN74HC04AN			
IC806	8-759-265-83	IC M65843FP			
IC808	8-759-634-51	IC M5218AP			
IC861	8-759-140-53	IC uPD4053BC			
< COIL >					
L511	1-410-521-11	INDUCTOR 100uH			

Ref. No.	Part No.	Description	Remark		
L840	1-410-521-11	INDUCTOR 100uH			
< TRANSISTOR >					
Q601	8-729-422-57	TRANSISTOR UN4111			
Q603	8-729-422-57	TRANSISTOR UN4111			
Q605	8-729-422-57	TRANSISTOR UN4111			
Q611	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q612	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q621	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q622	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q623	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q624	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q625	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q626	8-729-900-80	TRANSISTOR DTC114ES			
Q629	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q630	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q631	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q632	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q633	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q634	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q635	8-729-900-80	TRANSISTOR DTC114ES			
Q636	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q3151	8-729-900-80	TRANSISTOR DTC114ES			
Q3152	8-729-903-02	TRANSISTOR DTA143XS			
< RESISTOR >					
R501	1-249-419-11	CARBON	1.5K	5%	1/4W F
R502	1-249-401-11	CARBON	47	5%	1/4W F
R503	1-249-403-11	CARBON	68	5%	1/4W F
R504	1-247-807-31	CARBON	100	5%	1/4W
R505	1-249-407-11	CARBON	150	5%	1/4W F
R506	1-249-407-11	CARBON	150	5%	1/4W F
R507	1-247-815-91	CARBON	220	5%	1/4W
R508	1-249-411-11	CARBON	330	5%	1/4W
R509	1-249-413-11	CARBON	470	5%	1/4W F
R510	1-249-415-11	CARBON	680	5%	1/4W F
R511	1-249-417-11	CARBON	1K	5%	1/4W F
R517	1-249-419-11	CARBON	1.5K	5%	1/4W F
R518	1-249-401-11	CARBON	47	5%	1/4W F
R519	1-249-403-11	CARBON	68	5%	1/4W F
R520	1-247-807-31	CARBON	100	5%	1/4W
R521	1-249-407-11	CARBON	150	5%	1/4W F
R522	1-249-407-11	CARBON	150	5%	1/4W F
R523	1-247-815-91	CARBON	220	5%	1/4W
R524	1-249-411-11	CARBON	330	5%	1/4W
R525	1-249-413-11	CARBON	470	5%	1/4W F
R526	1-249-415-11	CARBON	680	5%	1/4W F
R527	1-249-419-11	CARBON	1.5K	5%	1/4W F
R528	1-249-401-11	CARBON	47	5%	1/4W F
R529	1-249-403-11	CARBON	68	5%	1/4W F
R530	1-247-807-31	CARBON	100	5%	1/4W

PANEL

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
R531	1-249-407-11	CARBON	150	5%	1/4W	F	R839	1-249-431-11	CARBON	15K	5%	1/4W	
R532	1-249-407-11	CARBON	150	5%	1/4W	F	R840	1-249-399-11	CARBON	33	5%	1/4W	F
R548	1-249-419-11	CARBON	1.5K	5%	1/4W	F	R841	1-247-843-11	CARBON	3.3K	5%	1/4W	
R549	1-247-807-31	CARBON	100	5%	1/4W								
R550	1-249-407-11	CARBON	150	5%	1/4W	F	R842	1-247-863-91	CARBON	22K	5%	1/4W	
							R843	1-249-431-11	CARBON	15K	5%	1/4W	
R551	1-249-407-11	CARBON	150	5%	1/4W	F	R844	1-249-431-11	CARBON	15K	5%	1/4W	
R552	1-247-815-91	CARBON	220	5%	1/4W		R846	1-249-431-11	CARBON	15K	5%	1/4W	
R553	1-249-429-11	CARBON	10K	5%	1/4W		R848	1-247-903-00	CARBON	1M	5%	1/4W	
R554	1-249-441-11	CARBON	100K	5%	1/4W								
R564	1-249-419-11	CARBON	1.5K	5%	1/4W	F	R849	1-247-843-11	CARBON	3.3K	5%	1/4W	
							R857	1-249-417-11	CARBON	1K	5%	1/4W	F
R565	1-247-807-31	CARBON	100	5%	1/4W		R861	1-249-431-11	CARBON	15K	5%	1/4W	
R566	1-249-407-11	CARBON	150	5%	1/4W	F	R862	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R567	1-249-407-11	CARBON	150	5%	1/4W	F	R884	1-249-434-11	CARBON	27K	5%	1/4W	
R586	1-247-815-91	CARBON	220	5%	1/4W								
R588	1-247-815-91	CARBON	220	5%	1/4W		R885	1-249-429-11	CARBON	10K	5%	1/4W	
							R886	1-249-429-11	CARBON	10K	5%	1/4W	
R591	1-249-403-11	CARBON	68	5%	1/4W	F	R887	1-249-431-11	CARBON	15K	5%	1/4W	
R592	1-249-401-11	CARBON	47	5%	1/4W	F	R888	1-249-429-11	CARBON	10K	5%	1/4W	
R593	1-249-403-11	CARBON	68	5%	1/4W	F	R889	1-249-429-11	CARBON	10K	5%	1/4W	
R594	1-249-401-11	CARBON	47	5%	1/4W	F							
R611	1-249-429-11	CARBON	10K	5%	1/4W		R891	1-247-807-31	CARBON	100	5%	1/4W	
							R3011	1-247-903-00	CARBON	1M	5%	1/4W	
R612	1-249-421-11	CARBON	2.2K	5%	1/4W	F	R3015	1-249-429-11	CARBON	10K	5%	1/4W	
R613	1-249-429-11	CARBON	10K	5%	1/4W		R3019	1-249-429-11	CARBON	10K	5%	1/4W	
R614	1-249-421-11	CARBON	2.2K	5%	1/4W	F	R3020	1-249-429-11	CARBON	10K	5%	1/4W	
R625	1-247-815-91	CARBON	220	5%	1/4W								
R626	1-249-411-11	CARBON	330	5%	1/4W		R3021	1-249-429-11	CARBON	10K	5%	1/4W	
							R3022	1-249-429-11	CARBON	10K	5%	1/4W	
R633	1-249-407-11	CARBON	150	5%	1/4W	F	R3023	1-249-429-11	CARBON	10K	5%	1/4W	
R634	1-249-407-11	CARBON	150	5%	1/4W	F	R3024	1-249-429-11	CARBON	10K	5%	1/4W	
R635	1-249-407-11	CARBON	150	5%	1/4W	F	R3036	1-249-429-11	CARBON	10K	5%	1/4W	
R636	1-249-407-11	CARBON	150	5%	1/4W	F							
R637	1-249-407-11	CARBON	150	5%	1/4W	F	R3037	1-249-429-11	CARBON	10K	5%	1/4W	
							R3038	1-249-429-11	CARBON	10K	5%	1/4W	
R641	1-249-407-11	CARBON	150	5%	1/4W	F	R3041	1-249-429-11	CARBON	10K	5%	1/4W	
R642	1-247-807-31	CARBON	100	5%	1/4W		R3042	1-247-843-11	CARBON	3.3K	5%	1/4W	
R643	1-247-807-31	CARBON	100	5%	1/4W		R3049	1-249-429-11	CARBON	10K	5%	1/4W	
R644	1-249-407-11	CARBON	150	5%	1/4W	F							
R645	1-249-407-11	CARBON	150	5%	1/4W	F	R3050	1-249-429-11	CARBON	10K	5%	1/4W	
							R3051	1-249-429-11	CARBON	10K	5%	1/4W	
R646	1-249-407-11	CARBON	150	5%	1/4W	F	R3052	1-249-429-11	CARBON	10K	5%	1/4W	
R648	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R3053	1-249-429-11	CARBON	10K	5%	1/4W	
R649	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R3087	1-249-441-11	CARBON	100K	5%	1/4W	
R650	1-249-425-11	CARBON	4.7K	5%	1/4W	F							
R651	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R3110	1-247-807-31	CARBON	100	5%	1/4W	
							R3115	1-247-807-31	CARBON	100	5%	1/4W	
R652	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R3122	1-247-807-31	CARBON	100	5%	1/4W	
R656	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R3123	1-247-807-31	CARBON	100	5%	1/4W	
R657	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R3124	1-247-807-31	CARBON	100	5%	1/4W	
R658	1-249-425-11	CARBON	4.7K	5%	1/4W	F							
R659	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R3138	1-247-807-31	CARBON	100	5%	1/4W	
							R3201	1-249-411-11	CARBON	330	5%	1/4W	
R660	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R3202	1-249-437-11	CARBON	47K	5%	1/4W	
R661	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R3203	1-247-895-91	CARBON	470K	5%	1/4W	
R698	1-249-393-11	CARBON	10	5%	1/4W	F	R3204	1-247-899-11	CARBON	680K	5%	1/4W	
R700	1-249-393-11	CARBON	10	5%	1/4W	F							
R705	1-249-429-11	CARBON	10K	5%	1/4W		R3211	1-249-411-11	CARBON	330	5%	1/4W	
							R3212	1-249-437-11	CARBON	47K	5%	1/4W	
R837	1-249-429-11	CARBON	10K	5%	1/4W		R3213	1-247-895-91	CARBON	470K	5%	1/4W	
R838	1-249-431-11	CARBON	15K	5%	1/4W		R3214	1-247-899-11	CARBON	680K	5%	1/4W	

PANEL

POWER AMPLIFIER

Ref. No.	Part No.	Description	Remark		
R3221	1-249-411-11	CARBON	330	5%	1/4W
R3222	1-249-437-11	CARBON	47K	5%	1/4W
R3223	1-247-895-91	CARBON	470K	5%	1/4W
R3224	1-247-899-11	CARBON	680K	5%	1/4W
R3231	1-247-807-31	CARBON	100	5%	1/4W
R3232	1-249-437-11	CARBON	47K	5%	1/4W
R3233	1-247-895-91	CARBON	470K	5%	1/4W
R3234	1-247-899-11	CARBON	680K	5%	1/4W
R3243	1-247-807-31	CARBON	100	5%	1/4W
< SWITCH >					
S501	1-554-303-21	SWITCH, TACTILE (SYSTEM POWER)			
S502	1-554-303-21	SWITCH, TACTILE (SLEEP)			
S503	1-554-303-21	SWITCH, TACTILE (CLOCK SET)			
S504	1-554-303-21	SWITCH, TACTILE (EFFECT)			
S505	1-554-303-21	SWITCH, TACTILE (ECHO)			
S506	1-554-303-21	SWITCH, TACTILE (KARAOKE PON/MPX)			
S507	1-554-303-21	SWITCH, TACTILE (TUNING MODE)			
S508	1-554-303-21	SWITCH, TACTILE (CURSOR CONTROL >)			
S509	1-554-303-21	SWITCH, TACTILE (CURSOR CONTROL ^)			
S510	1-554-303-21	SWITCH, TACTILE (CURSOR CONTROL <)			
S511	1-554-303-21	SWITCH, TACTILE (CURSOR CONTROL v)			
S517	1-554-303-21	SWITCH, TACTILE (ENTER/NEXT)			
S518	1-554-303-21	SWITCH, TACTILE (DISPLAY/DEMO)			
S519	1-554-303-21	SWITCH, TACTILE (REC)			
S520	1-554-303-21	SWITCH, TACTILE (DAILY 2)			
S521	1-554-303-21	SWITCH, TACTILE (DAILY 1)			
S522	1-554-303-21	SWITCH, TACTILE (TIMER SET)			
S523	1-554-303-21	SWITCH, TACTILE (b DOWN)			
S524	1-554-303-21	SWITCH, TACTILE (# UP)			
S525	1-554-303-21	SWITCH, TACTILE (FUNCTION)			
S526	1-554-303-21	SWITCH, TACTILE (EQ MEMORY)			
S527	1-554-303-21	SWITCH, TACTILE (FILE 1)			
S528	1-554-303-21	SWITCH, TACTILE (FILE 2)			
S529	1-554-303-21	SWITCH, TACTILE (FILE 3)			
S530	1-554-303-21	SWITCH, TACTILE (FILE 4)			
S531	1-554-303-21	SWITCH, TACTILE (FILE SELECT)			
S532	1-554-303-21	SWITCH, TACTILE (FILE 5)			
S549	1-554-303-21	SWITCH, TACTILE (SUPER TWEETER)			
S550	1-554-303-21	SWITCH, TACTILE (SURROUND)			
S551	1-554-303-21	SWITCH, TACTILE (DBFB)			
S552	1-554-303-21	SWITCH, TACTILE (TUNER/BAND)			
S565	1-554-303-21	SWITCH, TACTILE (STEREO/MONO)			
S566	1-554-303-21	SWITCH, TACTILE (TUNER MEMORY)			
S567	1-554-303-21	SWITCH, TACTILE (TUNING +)			
S568	1-554-303-21	SWITCH, TACTILE (TUNING -)			
S579	1-467-869-11	ENCODER, ROTARY (VOLUME)			
< VIBRATOR >					
X801	1-527-978-00	OSCILLATOR, CERAMIC (320kHz)			
X3001	1-579-233-11	VIBRATOR, CERAMIC (4MHz)			

Ref. No.	Part No.	Description	Remark		
*	A-4392-046-A	POWER AMPLIFIER BOARD, COMPLETE	*****		
< CAPACITOR >					
C1201	1-126-963-11	ELECT	4.7uF	20%	50V
C1202	1-162-294-31	CERAMIC	0.001uF	10%	50V
C1203	1-162-286-21	CERAMIC	220PF	10%	50V
C1204	1-104-664-11	ELECT	47uF	20%	10V
C1205	1-124-910-11	ELECT	47uF	20%	50V
C1206	1-124-122-11	ELECT	100uF	20%	50V
C1207	1-136-165-00	FILM	0.1uF	5%	50V
C1208	1-126-965-11	ELECT	22uF	20%	50V
C1210	1-136-495-11	FILM	0.068uF	5%	50V
C1211	1-136-495-11	FILM	0.068uF	5%	50V
C1220	1-126-924-11	ELECT	330uF	20%	10V
C1251	1-126-963-11	ELECT	4.7uF	20%	50V
C1252	1-162-294-31	CERAMIC	0.001uF	10%	50V
C1253	1-162-286-21	CERAMIC	220PF	10%	50V
C1254	1-104-664-11	ELECT	47uF	20%	10V
C1255	1-124-910-11	ELECT	47uF	20%	50V
C1256	1-124-122-11	ELECT	100uF	20%	50V
C1257	1-136-165-00	FILM	0.1uF	5%	50V
C1260	1-136-495-11	FILM	0.068uF	5%	50V
C1261	1-136-495-11	FILM	0.068uF	5%	50V
< CONNECTOR >					
CN1203	1-691-765-11	PLUG (MICRO CONNECTOR) 3P			
CN1204	1-691-770-11	PLUG (MICRO CONNECTOR) 8P			
< DIODE >					
D1201	8-719-987-63	DIODE 1N4148M			
D1202	8-719-987-63	DIODE 1N4148M			
D1203	8-719-987-63	DIODE 1N4148M			
D1251	8-719-987-63	DIODE 1N4148M			
<IC>					
IC1201	8-749-900-34	IC STK-4182MK2			
< TRANSISTOR >					
Q1201	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA			
Q1251	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA			
< RESISTOR >					
R1201	1-249-417-11	CARBON	1K	5%	1/4W F
R1202	1-249-437-11	CARBON	47K	5%	1/4W
R1203	1-249-415-11	CARBON	680	5%	1/4W F
R1204	1-249-437-11	CARBON	47K	5%	1/4W
R1205	1-260-105-11	CARBON	3.3K	5%	1/2W
R1207	1-260-105-11	CARBON	3.3K	5%	1/2W
△R1209	1-212-881-11	FUSIBLE	100	5%	1/4W F
△R1210	1-208-602-11	WIREWOUND	0.22	10%	2W F
R1211	1-249-417-11	CARBON	1K	5%	1/4W F
R1212	1-249-431-11	CARBON	15K	5%	1/4W

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

POWER AMPLIFIER

SP TERMINAL

ST SW

Ref. No.	Part No.	Description			Remark
R1213	1-249-441-11	CARBON	100K	5%	1/4W
R1214	1-260-099-11	CARBON	1K	5%	1/2W
R1217	1-260-099-11	CARBON	1K	5%	1/2W
R1218	1-260-076-11	CARBON	10	5%	1/2W
R1228	1-247-882-11	CARBON	130K	5%	1/4W
R1230	1-247-843-11	CARBON	3.3K	5%	1/4W
R1242	1-249-429-11	CARBON	10K	5%	1/4W
R1251	1-249-417-11	CARBON	1K	5%	1/4W
R1252	1-249-437-11	CARBON	47K	5%	1/4W
R1253	1-249-415-11	CARBON	680	5%	1/4W
R1254	1-249-437-11	CARBON	47K	5%	1/4W
R1255	1-260-105-11	CARBON	3.3K	5%	1/2W
R1257	1-260-105-11	CARBON	3.3K	5%	1/2W
△R1259	1-212-881-11	FUSIBLE	100	5%	1/4W
△R1260	1-208-602-11	WIREWOUND	0.22	10%	2W
R1261	1-249-417-11	CARBON	1K	5%	1/4W
R1262	1-249-431-11	CARBON	15K	5%	1/4W
R1263	1-249-441-11	CARBON	100K	5%	1/4W
R1268	1-260-076-11	CARBON	10	5%	1/2W

*	1-664-519-11	SP TERMINAL BOARD	*****		
		< JACK >			
J3101	1-537-849-11	TERMINAL BOARD (ANTENNA)(2P)	(WOOFER SYSTEM)		

*	A-4392-311-A	ST SW BOARD, COMPLETE	*****		
	4-948-272-11	BUTTON (EQ)			
		< CAPACITOR >			
C3001	1-162-286-21	CERAMIC	220PF	10%	50V
C3002	1-104-664-11	ELECT	47uF	20%	10V
C3003	1-124-910-11	ELECT	47uF	20%	50V
C3004	1-124-910-11	ELECT	47uF	20%	50V
C3005	1-124-903-11	ELECT	1uF	20%	50V
C3006	1-124-910-11	ELECT	47uF	20%	50V
C3007	1-162-282-31	CERAMIC	100PF	10%	50V
C3008	1-162-282-31	CERAMIC	100PF	10%	50V
C3010	1-136-159-00	FILM	0.033uF	5%	50V
C3011	1-104-666-11	ELECT	220uF	20%	6.3V
C3012	1-104-666-11	ELECT	220uF	20%	6.3V
C3013	1-124-443-00	ELECT	100uF	20%	10V
C3014	1-162-282-31	CERAMIC	100PF	10%	50V
C3015	1-124-910-11	ELECT	47uF	20%	50V
C3016	1-162-282-31	CERAMIC	100PF	10%	50V
C3051	1-126-963-11	ELECT	4.7uF	20%	50V
C3052	1-124-907-11	ELECT	10uF	20%	50V
C3053	1-136-171-00	FILM	0.33uF	5%	50V

Ref. No.	Part No.	Description	Remark		
C3054	1-136-168-00	FILM	0.18uF	5%	50V
C3056	1-126-963-11	ELECT	4.7uF	20%	50V
C3101	1-162-215-31	CERAMIC	47PF	5%	50V
C3102	1-162-215-31	CERAMIC	47PF	5%	50V
C3103	1-137-437-11	FILM	0.0056uF	5%	50V
C3104	1-137-364-11	FILM	0.001uF	5%	50V
C3105	1-137-437-11	FILM	0.0056uF	5%	50V
C3106	1-137-364-11	FILM	0.001uF	5%	50V
C3107	1-124-907-11	ELECT	10uF	20%	50V
C3108	1-126-963-11	ELECT	4.7uF	20%	50V
C3109	1-124-907-11	ELECT	10uF	20%	50V
C3110	1-162-203-31	CERAMIC	15PF	5%	50V
< CONNECTOR >					
* CN3101	1-564-509-11	PLUG, CONNECTOR 6P			
* CN3102	1-564-507-11	PLUG, CONNECTOR 4P			
CN3103	1-564-505-11	PLUG, CONNECTOR 2P			
* CN3105	1-564-507-11	PLUG, CONNECTOR 4P			
* CN3106	1-564-507-11	PLUG, CONNECTOR 4P			
CN3107	1-564-506-11	PLUG, CONNECTOR 3P			
< DIODE >					
D3001	8-719-987-63	DIODE	1N4148M		
D3002	8-719-987-63	DIODE	1N4148M		
D3014	8-719-987-63	DIODE	1N4148M		
D3101	8-719-987-63	DIODE	1N4148M		
D3102	8-719-987-63	DIODE	1N4148M		
D3103	8-719-987-63	DIODE	1N4148M		
< IC >					
IC3001	8-749-010-33	IC	STK4042MK2		
IC3002	8-759-111-68	IC	uPC1237HA		
IC3003	8-759-634-51	IC	M5218AP		
IC3101	8-759-634-51	IC	M5218AP		
IC3102	8-759-634-51	IC	M5218AP		
IC3103	8-759-634-51	IC	M5218AP		
< COIL >					
L3001	1-420-872-00	COIL, AIR-CORE 2.2uH			
< TRANSISTOR >					
Q3001	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA		
Q3002	8-729-900-63	TRANSISTOR	DTA124ES		
Q3101	8-729-224-63	TRANSISTOR	2SK246-BL		
Q3102	8-729-224-63	TRANSISTOR	2SK246-BL		
Q3103	8-729-224-63	TRANSISTOR	2SK246-BL		
Q3104	8-729-224-63	TRANSISTOR	2SK246-BL		
Q3105	8-729-422-57	TRANSISTOR	UN4111		
Q3106	8-729-119-78	TRANSISTOR	2SC2785-HFE		
Q3107	8-729-422-57	TRANSISTOR	UN4111		
Q3108	8-729-140-82	TRANSISTOR	2SA988-PAFAEA		

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

ST SW	TABLE SENSOR	TC-CONTROL
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Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark			
Q3109	8-729-900-36	TRANSISTOR DTC124ES					R3127	1-249-441-11	CARBON 100K 5%	1/4W			
		< RESISTOR >					R3130	1-247-791-91	CARBON 22 5%	1/4W			
R3001	1-249-438-11	CARBON 56K 5%	1/4W				R3133	1-249-431-11	CARBON 15K 5%	1/4W			
R3002	1-249-414-11	CARBON 560 5%	1/4W F				R3999	1-249-437-11	CARBON 47K 5%	1/4W			
R3003	1-249-429-11	CARBON 10K 5%	1/4W						< RELAY >				
△ R3004	1-212-881-11	FUSIBLE 100 5%	1/4W F										
△ R3005	1-212-881-11	FUSIBLE 100 5%	1/4W F				RY3001	1-515-920-11	RELAY (24V)				

R3006	1-249-438-11	CARBON 56K 5%	1/4W				*	1-659-058-13	TABLE SENSOR BOARD				
R3007	1-249-417-11	CARBON 1K 5%	1/4W F						*****				
R3008	1-249-437-11	CARBON 47K 5%	1/4W						< IC >				
R3009	1-249-389-11	CARBON 4.7 5%	1/4W F				IC202	8-749-924-18	IC PHOTO INTERRUPTER RPI-1391				
R3010	1-249-389-11	CARBON 4.7 5%	1/4W F						< RESISTOR >				
R3011	1-249-389-11	CARBON 4.7 5%	1/4W F				R207	1-249-416-11	CARBON 820 5%	1/4W F			
R3012	1-249-389-11	CARBON 4.7 5%	1/4W F						*****				
R3014	1-249-431-11	CARBON 15K 5%	1/4W				*	1-659-413-11	TC-CONTROL BOARD				
R3015	1-249-429-11	CARBON 10K 5%	1/4W						*****				
R3016	1-249-441-11	CARBON 100K 5%	1/4W						< DIODE >				
R3017	1-249-435-11	CARBON 33K 5%	1/4W				D630	8-719-032-86	DIODE SEL5420E (▷)				
△ R3018	1-216-456-00	METAL OXIDE 820 5%	2W F				D631	8-719-032-86	DIODE SEL5420E (◁)				
R3019	1-249-429-11	CARBON 10K 5%	1/4W				D632	8-719-032-86	DIODE SEL5420E (▷)				
△ R3020	1-208-602-11	WIREWOUND 0.22 10%	2W F				D633	8-719-032-86	DIODE SEL5420E (◁)				
R3021	1-249-417-11	CARBON 1K 5%	1/4W F				D634	8-719-058-03	DIODE SEL5423E-TP15				
R3022	1-249-431-11	CARBON 15K 5%	1/4W				D635	8-719-058-03	DIODE SEL5423E-TP15				
R3023	1-249-429-11	CARBON 10K 5%	1/4W						< RESISTOR >				
R3054	1-247-856-00	CARBON 11K 5%	1/4W				R538	1-247-815-91	CARBON 220 5%	1/4W			
R3055	1-247-856-00	CARBON 11K 5%	1/4W				R539	1-249-411-11	CARBON 330 5%	1/4W			
R3101	1-249-437-11	CARBON 47K 5%	1/4W				R540	1-249-413-11	CARBON 470 5%	1/4W F			
R3102	1-247-843-11	CARBON 3.3K 5%	1/4W				R541	1-249-415-11	CARBON 680 5%	1/4W F			
R3103	1-247-843-11	CARBON 3.3K 5%	1/4W				R542	1-249-417-11	CARBON 1K 5%	1/4W F			
R3104	1-249-441-11	CARBON 100K 5%	1/4W				R543	1-249-419-11	CARBON 1.5K 5%	1/4W F			
R3105	1-249-441-11	CARBON 100K 5%	1/4W				R544	1-249-421-11	CARBON 2.2K 5%	1/4W F			
R3106	1-249-437-11	CARBON 47K 5%	1/4W				R545	1-247-843-11	CARBON 3.3K 5%	1/4W			
R3107	1-249-415-11	CARBON 680 5%	1/4W F				R546	1-249-427-11	CARBON 6.8K 5%	1/4W F			
R3108	1-249-415-11	CARBON 680 5%	1/4W F				R547	1-249-431-11	CARBON 15K 5%	1/4W			
R3109	1-247-878-00	CARBON 91K 5%	1/4W				R672	1-247-815-91	CARBON 220 5%	1/4W			
R3110	1-247-878-00	CARBON 91K 5%	1/4W				R673	1-247-815-91	CARBON 220 5%	1/4W			
R3111	1-249-417-11	CARBON 1K 5%	1/4W F						< SWITCH >				
R3112	1-249-441-11	CARBON 100K 5%	1/4W				S539	1-554-303-21	SWITCH, TACTILE (▶▶)(DECK B)				
R3114	1-249-429-11	CARBON 10K 5%	1/4W				S540	1-554-303-21	SWITCH, TACTILE (◀◀)(DECK B)				
R3115	1-249-429-11	CARBON 10K 5%	1/4W				S541	1-554-303-21	SWITCH, TACTILE (■)(DECK B)				
R3116	1-249-429-11	CARBON 10K 5%	1/4W				S542	1-554-303-21	SWITCH, TACTILE (▷)(DECK B)				
R3117	1-249-435-11	CARBON 33K 5%	1/4W				S543	1-554-303-21	SWITCH, TACTILE (▷)(DECK B)				
R3118	1-249-435-11	CARBON 33K 5%	1/4W										
R3119	1-249-437-11	CARBON 47K 5%	1/4W										
R3120	1-249-437-11	CARBON 47K 5%	1/4W										
R3121	1-249-437-11	CARBON 47K 5%	1/4W										
R3122	1-249-437-11	CARBON 47K 5%	1/4W										
R3123	1-249-429-11	CARBON 10K 5%	1/4W										
R3124	1-249-429-11	CARBON 10K 5%	1/4W										
R3125	1-249-428-11	CARBON 8.2K 5%	1/4W F										
R3126	1-249-428-11	CARBON 8.2K 5%	1/4W F										

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

TC-CONTROL

TC-SW

TCB

Ref. No.	Part No.	Description	Remark			
S544	1-554-303-21	SWITCH, TACTILE (▷)(DECK A)				
S545	1-554-303-21	SWITCH, TACTILE (◁)(DECK A)				
S546	1-554-303-21	SWITCH, TACTILE (▶▶)(DECK A)				
S547	1-554-303-21	SWITCH, TACTILE (◀◀)(DECK A)				
S548	1-554-303-21	SWITCH, TACTILE (■)(DECK A)				

*	1-659-412-11	TC-SW BOARD				

		< CONNECTOR >				
CN503	1-573-734-31	PIN, CONNECTOR 7P				
		< DIODE >				
D628	8-719-058-17	DIODE LNJ401NPYJA (II)				
D629	8-719-057-09	DIODE LNJ801LPDJA (● REC)				
		< RESISTOR >				
R533	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R534	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R535	1-247-843-11	CARBON	3.3K	5%	1/4W	
R536	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R590	1-249-417-11	CARBON	1K	5%	1/4W	F
		< SWITCH >				
S533	1-554-303-21	SWITCH, TACTILE (CD SYNCHRO)				
S534	1-554-303-21	SWITCH, TACTILE (HIGH SPEED DUBBING)				
S535	1-554-303-21	SWITCH, TACTILE (II)				
S536	1-554-303-21	SWITCH, TACTILE (● REC)				
S537	1-554-303-21	SWITCH, TACTILE (DIRECTION)				

*	A-4303-555-A	TCB BOARD, COMPLETE				
		< CAPACITOR >				
C1	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C2	1-104-664-11	ELECT	47uF	20%	16V	
C3	1-164-159-21	CERAMIC	0.1uF		50V	
C5	1-162-306-11	CERAMIC	10000PF	30%	16V	
C6	1-162-306-11	CERAMIC	10000PF	30%	16V	
C7	1-101-004-00	CERAMIC	0.01uF		50V	
C8	1-162-306-11	CERAMIC	10000PF	30%	16V	
C9	1-162-306-11	CERAMIC	10000PF	30%	16V	
C11	1-164-159-21	CERAMIC	0.1uF		50V	
C12	1-162-198-31	CERAMIC	8.2PF	10%	50V	
C14	1-162-306-11	CERAMIC	10000PF	30%	16V	
C21	1-102-960-00	CERAMIC	24PF	5%	50V	
C22	1-164-159-21	CERAMIC	0.1uF		50V	
C23	1-162-306-11	CERAMIC	10000PF	30%	16V	
C24	1-104-664-11	ELECT	47uF	20%	16V	
C25	1-162-306-11	CERAMIC	10000PF	30%	16V	
C26	1-126-964-11	ELECT	10uF	20%	50V	

Ref. No.	Part No.	Description				Remark
C27	1-164-159-21	CERAMIC	0.1uF		50V	
C28	1-124-925-11	ELECT	2.2uF	20%	100V	
C29	1-102-960-00	CERAMIC	24PF	5%	50V	
C30	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C31	1-162-306-11	CERAMIC	10000PF	30%	16V	
C41	1-124-443-00	ELECT	100uF	20%	10V	
C42	1-162-306-11	CERAMIC	10000PF	30%	16V	
C43	1-126-962-11	ELECT	3.3uF	20%	50V	
C44	1-162-306-11	CERAMIC	10000PF	30%	16V	
C45	1-124-589-11	ELECT	47uF	20%	16V	
C46	1-162-600-11	CERAMIC	4700PF	30%	16V	
C47	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C48	1-126-160-11	ELECT	1uF	20%	50V	
C49	1-136-159-00	METALIZED FILM	0.033uF	5%	50V	
C50	1-136-159-00	METALIZED FILM	0.033uF	5%	50V	
C53	1-126-964-11	ELECT	10uF	20%	50V	
C54	1-126-157-11	ELECT	10uF	20%	16V	
C55	1-126-964-11	ELECT	10uF	20%	50V	
C56	1-126-964-11	ELECT	10uF	20%	50V	
C57	1-164-159-21	CERAMIC	0.1uF		50V	
C58	1-162-306-11	CERAMIC	10000PF	30%	16V	
C59	1-164-159-21	CERAMIC	0.1uF		50V	
C61	1-164-159-21	CERAMIC	0.1uF		50V	
C62	1-104-664-11	ELECT	47uF	20%	16V	
C63	1-164-159-21	CERAMIC	0.1uF		50V	
C64	1-124-902-00	ELECT	0.47uF	20%	50V	
C65	1-124-903-11	ELECT	1.0uF	20%	50V	
C66	1-124-903-11	ELECT	1.0uF	20%	50V	
C67	1-126-964-11	ELECT	10uF	20%	50V	
C68	1-162-306-11	CERAMIC	10000PF	30%	16V	
C69	1-162-306-11	CERAMIC	10000PF	30%	16V	
C70	1-162-306-11	CERAMIC	10000PF	30%	16V	
C71	1-162-306-11	CERAMIC	10000PF	30%	16V	
C73	1-162-306-11	CERAMIC	10000PF	30%	16V	
C74	1-126-964-11	ELECT	10uF	20%	50V	
< FILTER >						
CF1	1-567-389-11	FILTER, CERAMIC				
CF2	1-567-389-11	FILTER, CERAMIC				
< CONNECTOR >						
* CN1	1-568-832-11	SOCKET, CONNECTOR 13P				
< DIODE >						
D1	8-719-933-33	DIODE HZS6A1L				
D2	8-719-987-63	DIODE 1N4148M				
< FRONTEND >						
FE1	1-233-533-11	ENCAPSULATED COMPONENT				
FE2	1-239-260-11	ENCAPSULATED COMPONENT				

TCB

TRANS

Ref. No.	Part No.	Description	Remark			
< IC >						
IC1	8-759-288-54	IC LC72130				
IC2	8-759-176-03	IC LA1835				
< IFT >						
IFT41	1-409-636-11	TRANSFORMER, IF (CERAMIC FILTER)				
< COIL >						
L41	1-410-119-11	MICRO INDUCTOR (EL TYPE) 1mH				
< TRANSISTOR >						
Q1	8-729-230-99	TRANSISTOR	2SC2669-OY			
Q2	8-729-230-99	TRANSISTOR	2SC2669-OY			
Q3	8-729-230-99	TRANSISTOR	2SC2669-OY			
Q4	8-729-230-99	TRANSISTOR	2SC2669-OY			
Q5	8-729-422-57	TRANSISTOR	UN4111			
< RESISTOR >						
R1	1-249-401-11	CARBON	47	5%	1/4W	F
R2	1-249-411-11	CARBON	330	5%	1/4W	
R3	1-249-411-11	CARBON	330	5%	1/4W	
R5	1-249-411-11	CARBON	330	5%	1/4W	
R6	1-247-863-91	CARBON	22K	5%	1/4W	
R7	1-249-411-11	CARBON	330	5%	1/4W	
R8	1-249-411-11	CARBON	330	5%	1/4W	
R9	1-247-863-91	CARBON	22K	5%	1/4W	
R10	1-249-411-11	CARBON	330	5%	1/4W	
R11	1-247-863-91	CARBON	22K	5%	1/4W	
R12	1-249-411-11	CARBON	330	5%	1/4W	
R13	1-249-411-11	CARBON	330	5%	1/4W	
R14	1-247-863-91	CARBON	22K	5%	1/4W	
R15	1-249-429-11	CARBON	10K	5%	1/4W	
R16	1-249-437-11	CARBON	47K	5%	1/4W	
R19	1-249-399-11	CARBON	33	5%	1/4W	F
R21	1-247-807-31	CARBON	100	5%	1/4W	
R22	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R23	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R24	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R25	1-247-807-31	CARBON	100	5%	1/4W	
R26	1-249-411-11	CARBON	330	5%	1/4W	
R27	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R28	1-247-843-11	CARBON	3.3K	5%	1/4W	
R29	1-249-417-11	CARBON	1K	5%	1/4W	F
R30	1-249-417-11	CARBON	1K	5%	1/4W	F
R31	1-249-417-11	CARBON	1K	5%	1/4W	F
R32	1-249-417-11	CARBON	1K	5%	1/4W	F
R33	1-247-807-31	CARBON	100	5%	1/4W	
R34	1-249-429-11	CARBON	10K	5%	1/4W	
R35	1-249-429-11	CARBON	10K	5%	1/4W	
R36	1-249-437-11	CARBON	47K	5%	1/4W	
R37	1-249-417-11	CARBON	1K	5%	1/4W	

Ref. No.	Part No.	Description	Remark			
R41	1-249-429-11	CARBON	10K	5%	1/4W	
R43	1-247-843-11	CARBON	3.3K	5%	1/4W	
R44	1-247-843-11	CARBON	3.3K	5%	1/4W	
R46	1-249-442-11	CARBON	510	5%	1/4W	
R47	1-249-399-11	CARBON	33	5%	1/4W	F
R48	1-247-843-11	CARBON	3.3K	5%	1/4W	
R49	1-249-393-11	CARBON	10	5%	1/4W	F
R50	1-249-429-11	CARBON	10K	5%	1/4W	
R51	1-249-441-11	CARBON	100K	5%	1/4W	
R52	1-249-429-11	CARBON	10K	5%	1/4W	
R53	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R54	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R99	1-249-399-11	CARBON	33	5%	1/4W	F
< VARIABLE RESISTOR >						
RV41	1-238-600-11	RES, ADJ, CARBON 10K				
RV42	1-238-601-11	RES, ADJ, CARBON 22K				
< TERMINAL >						
TM1	1-537-238-21	TERMINAL BOARD (ANTENNA)				
< VIBRATOR >						
X21	1-567-713-11	VIBRATOR, CRYSTAL (4.5MHz)				
X41	1-577-075-11	OSCILLATOR, CERAMIC (456KHz)				
X42	1-760-220-11	FILTER, CERAMIC (10.7MHz)				
X43	1-527-981-00	FILTER, CERAMIC (450KHz)				

*	1-659-218-11	TRANS BOARD	*****			
	1-533-233-21	HOLDER, FUSE				
< CAPACITOR >						
C1600	1-164-159-21	CERAMIC	0.1uF		50V	
C1601	1-164-159-21	CERAMIC	0.1uF		50V	
< CONNECTOR >						
CN1601	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P				
CN1604	1-564-524-11	PLUG, CONNECTOR 9P				
< FUSE >						
△F1604	1-532-503-31	FUSE, TIME LAG (1.6A 250V)				
< RESISTOR >						
△R1601	1-217-637-00	FUSIBLE	1	5%	1/4W	F
△R1602	1-219-120-11	FUSIBLE	0.15	5%	1/4W	F
△R1603	1-219-120-11	FUSIBLE	0.15	5%	1/4W	F

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
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< TRANSFORMER >

△ T1601	1-431-130-11	TRANSFORMER, POWER	
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MISCELLANEOUS

3	1-751-086-11	WIRE (FLAT TYPE) (13 CORE)	
155	1-773-220-11	WIRE (FLAT TYPE) (25 CORE)	
157	1-776-238-11	WIRE (FLAT TYPE) (19 CORE)	
158	1-765-338-11	WIRE (FLAT TYPE) (21 CORE)	
159	1-590-218-11	WIRE (FLAT TYPE) (11 CORE)	
* 357	1-452-538-11	MAGNET	
△ 401	8-848-387-01	OPTICAL PICK-UP KSS-213BA/S-N	
402	1-769-069-11	WIRE (FLAT TYPE)(16 CORE)	
△ CNP1601	1-751-326-21	CORD, POWER	
FL501	1-517-490-21	INDICATOR TUBE, FLUORESCENT	

△ F1604	1-532-503-31	FUSE, TIME LAG (1.6A 250V)	
HP101	1-500-093-11	HEAD, MAGNETIC (PLAYBACK)	
HRPE101	1-500-094-11	HEAD, MAGNETIC (REC/PB/ERASE)	
M1	X-3371-223-1	MOTOR ASSY (CAPSTAN)	
M2	A-2004-410-A	MOTOR ASSY (TRIGGER)	

M101	X-4917-523-4	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
M201	A-4660-977-A	MOTOR ASSY (TABLE)	
△ T1601	1-431-130-11	TRANSFORMER, POWER	

ACCESSORIES & PACKING MATERIALS

	1-501-374-11	ANTENNA, LOOP	
	1-501-659-41	ANTENNA (FM)	
	3-858-096-11	MANUAL, INSTRUCTION (ENGLISH, THAI)	
*	4-979-431-01	CUSHION (BOTTOM)	
	4-979-371-01	COVER, BATTERY (for RM-SD50)	
*	4-980-140-01	CUSHION (UPPER)	
	8-917-537-90	REMOCON RM-SD50//M SET	

Ref. No.	Part No.	Description	Remark
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HARDWARE LIST

#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-685-871-01	SCREW +BVTT 3X6 (S)	
#4	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3	
#5	7-685-862-09	SCREW +BVTT 2.6X6 (S)	
#6	7-685-131-19	SCREW +BTP 2.6X4 TYPE2 N-S	
#7	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#8	7-621-775-10	SCREW +B 2.6X4	
#9	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S	
#10	7-623-921-01	RING, RETAINING, CAPSTAN	
#11	7-621-775-00	SCREW +B 2.6X3	
#12	7-621-255-15	SCREW +P 2X3	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

HCD-N455KW

SONY

Thai Model

SERVICE MANUAL

SUPPLEMENT-1

File this supplement with the service manual.

Subject: TCB BOARD CHANGED TO TUNER PACK

(ECN-TA700968)

Page	FORMER				NEW			
	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
			*** EXPLODED VIEWS ***				*** EXPLODED VIEWS ***	
76	2	A-4303-555-A	TCB BOARD, COMPLETE		2	1-233-545-11	ENCAPSLATED COMPONENT (FM/AM TUNER PACK)	
			*** ELECTRICAL PARTS LIST ***				*** ELECTRICAL PARTS LIST ***	
101		A-4303-555-A	TCB BOARD, COMPLETE			1-233-545-11	ENCAPSLATED COMPONENT (FM/AM TUNER PACK)	

NOTE:

- Above ENCAPSLATED COMPONENT is supplied as an assembled block, so mounted electrical parts are not supplied.
And that, there is no necessity for electrical adjustment.